



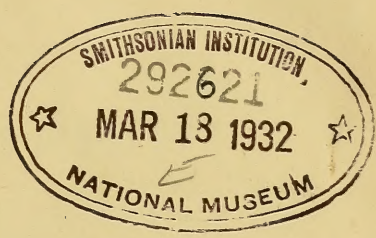


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THE
JOURNAL
OF THE
Natural History Society
of Siam.

Volume V.

Comprising 4 parts and containing 1 plate and 1 map.

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NOTE.

In the preface to the present volume, written in 1921, it was stated that in addition to an account of the Birds of South-west and Peninsular Siam one of the Mammals also would be prepared by Mr. H. C. Robinson and myself. The final part on the birds was issued in September 1924 and thereafter circumstances rendered it impossible for my late colleague and myself to collaborate on the projected accounts of the mammals, or for one or other of us to prepare it by himself.

The report on the Birds is sufficiently lengthy to form by itself a volume, which, I understand, will be closed with the issue of an index. Since the report was completed there have been a few additions to the fauna of the area dealt with, two or three birds have been separated, with new names, as distinct local races; and there have been a number of changes in the nomenclature we used—this last a change to which the names of birds, more or less all over the world, are now being subject.

One list of addenda and corrigenda has already been printed (pp. 209—218), but I do not propose to offer another as the necessary alterations should be fairly obvious to the ornithologist who keeps himself *au fait* with current literature.

Singapore, 13th November, 1930.

C. BODEN KLOSS.

EDITORIAL NOTE.

The first three numbers of this volume were published by the Natural History Society of Siam. The fourth, or index number, is published by the Siam Society, with which the Natural History Society amalgamated in 1925.

CORRECTION TO KEYS.

Laridae.

Page 47. Numbers in right-hand margin:—
for 12, 15, 11 read respectively 11, 12, 15.

Limicolae.

Page 55. Transpose *Limosa limosa melanuroides* and *Limosa lapponica novae-zelandiae*.

Campephagidae.

Page 245. Numbers in right-hand margin:—
for 6 read 4, for 5 read 6, for 4 read 5, for 3 read 9, for 19
read 12, for 12 read 15, for 15 read 13.

For other corrections see 'Addenda and Corrigenda'
pp. 209—218.

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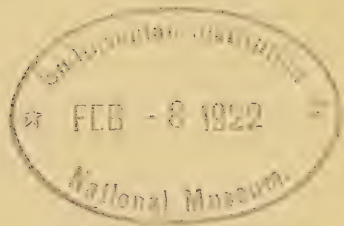
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PREFACE.

Volume V. of this Journal will be devoted to the Fauna of South-west and Peninsular Siam. It will give an account, as complete as possible, of the Mammals, Birds, Reptiles and Batrachians of that region. The numbers comprising it will be issued concurrently with the usual publication of the Society, but for the sake of convenience in reference, they will be retained as a separate volume. The account of the Mammals and Birds has been undertaken by Messrs. Robinson and Kloss, that of the Reptiles and Batrachians by Dr. Malcolm Smith.

The region under survey is a long narrow strip of country running due north and south for nearly 500 miles. At its greatest breadth it is barely 100 miles across, at its narrowest it is less than 20. To the north of it lies Siam proper, to the south the Malay Peninsula. Siam, however, with its definite seasons, and annual six months of drought, has a very different climate from that of the Peninsula where the temperature and rainfall hardly vary from month to month. Each country has thus a distinctive fauna of its own, and the transitional area from one to the other occurs in the region which has been defined as South-west and Peninsular Siam.

THE EDITORS.

THE
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OF THE
Natural History Society of Siam.

Volume V.

Bangkok.

Number 1.

THE BIRDS OF SOUTH-WEST AND PENINSULAR SIAM,

BEING AN ACCOUNT OF THE BIRDS OF SIAM FROM THE HEAD OF THE GULF OF SIAM
TO THE MALAYAN BORDER, WITH REFERENCES TO THE RECORDED OCCURRENCES
AND A KEY TO THE INDIVIDUAL SPECIES.

By HERBERT C. ROBINSON, C.M.Z.S., M.B.O.U., Director of Museums,
Federated Malay States,

AND

CECIL BODEN KLOSS, F.Z.S., M.B.O.U., Assistant Director of Museums,
Federated Malay States.

(With a map).

INTRODUCTION

By HERBERT C. ROBINSON.

The Kingdom of Siam from a zoological point of view contains such a mixture of different faunas that, unless dealt with in the most elaborate detail, any general list of its avifauna will convey little of zoogeographical value. In the extreme south its fauna is almost exclusively Malayan. Further north, to the west of the Chao Praya river, it is identical with that of Tenasserim, while that of the N.W. and the neighbourhood of Chiangmai approximates to the dry zone of Burma and the Shan States. The extreme N. and N.E., which are least known, probably contains a certain proportion of Yunnanese birds. The central and eastern portions of the Kingdom are the only areas which contain forms that may be claimed as distinctively Siamese, and, with a few notable exceptions, these forms are not strongly differentiated. The fauna of S.E. Siam, as shown by the collections made by one of us, is, as might be expected, largely Cambodian and French Indo-Chinese. (*Ibis* 1915, pp. 718-761).

It will therefore be found that the total number of species of birds found in Siam will vastly exceed the corresponding lists for the Malay Peninsula, Burma, and other surrounding countries, and will probably be not much less than 1,200-1,300 species. Of late years much ornithological work has been done in Siam by Williamson, Gairdner, Herbert, Gyldenstolpe, Eisenhofer, Barton and ourselves, and a considerable amount of literature on the subject has been published. No exhaustive faunal and regional lists have as yet been issued, with the exception of a List of the Birds of Bangkok by Williamson ¹, and a general list of the Birds of Siam by Count Nyls Gyldenstolpe ², and we have therefore thought it well to publish a full and detailed account of the birds of S. W. and Peninsular Siam, which we have defined as the portion of Siam south of the head of the Gulf of Siam. As regards Peninsular Siam—that portion of the country south of the Isthmus of Kra or Pakchan river—we can claim that our list is almost complete: excluding whatever new forms may be found in the Nakorn range, no new additions are likely to be made other than casual migrants, small owls and frogmouths, and other nocturnal birds whose capture is always a matter of chance, and common southern Malayan birds of which actual specimens, for some reason or other, may not be in the possession of our own or other museums. For the northern portion of the area, from the Gulf of Siam to the Pakchan river, i. e., S. W. Siam, we do not claim any such completeness, though even in this section we do not think that the number of species that will ultimately be added to the list will prove large or of great importance.

Some statement may be given as to material on which this paper is founded. Since 1901 one or other, or both of us, as well as parties of the collectors attached to the F. M. S. Museums, have collected over the southern portion of the area, and the collections made have numbered several thousand skins. A considerable number of these are in the British Museum (Nat. Hist.), South Kensington, and a few at Tring, but the bulk remain with us and must outnumber very

1. Journ. Nat. Hist. Soc. Siam, vols. i and ii.

2. *Ibis*, 1919.

many times all other collections made in the area. We have also had the advantage from time to time of examining collections made by Mr. Williamson and Mr. Herbert and their collectors, but the number so dealt with has not been large.

A word is necessary as to the general plan of the paper. From considerations of expense and time it has not been thought necessary or desirable to list all the specimens examined of every form included by us. Only those specimens, therefore, some 1500 in number, which were collected on our last expedition from January–April 1919, are listed. These specimens were all carefully measured in the flesh, which has not been the case with previous collections. The dimensions given are in the same order as the specimens are listed in.

As our publication is intended to be exhaustive to date, it has been thought desirable to give as fully as possible all records of occurrences in the area. Synonymic and taxonomical references are as far as possible omitted. As articles on the area are few in number, but have constantly to be referred to, it has been found to be a saving of space to denote each by a capital, A. B. C., etc., after the first.

The full references of the whole series are printed at the foot of each page. We have adopted this ingenious plan from Mr. Stanley Kemp's "Catalogue of the Scientific Serial Publications in the Principal Libraries of Calcutta." (Calcutta, 1918).

In a certain number of cases where we are convinced that a form *must* occur in the area, though it has not been recorded, we have added it to our list. Such species are distinguished, apart from any context, by having no serial number attached.

It is hoped that the keys may be of use to those wishful of identifying birds from this region. There are, as a rule, so few species to each genus that it has been found simpler to combine the keys into one for each family: it must be understood that these are strictly artificial and will only work against the species in our list. It has been found undesirable to attempt to provide primary keys for the orders and families. These it is hoped will not be found necessary, it being presumed that the majority of persons into whose hands this

publication is likely to fall will have some slight knowledge of ornithology. We have as far as possible made use of trinomials throughout. In those cases in which binomials appear, it is not because we are assured that a species does not vary, but merely because we are not in a position to decide whether such is, or is not, the case. Nor are we yet prepared to subscribe to the theory that identical subspecies may occur in widely separated localities between which other forms occur. It is true that, especially in the case of certain South Indian and Malayan forms, there are cases that appear to support this theory; but diligent examination will generally disclose points of difference, even if extremely slight, which are generally constant. Similar anomalies occur among certain bats and lemurs inhabiting islands on opposite sides of the Malay Peninsula.

We have been conservative in the matter of genera and have not adopted several recent emendations, though we confess we have no logical defence for not doing it.

We have described elsewhere ¹, on admittedly slight grounds, certain new forms that have occurred to us in the writing of this paper and have, as it may appear to some people, possibly unreasonably, questioned the reality of others already described; but in all cases we have given our arguments.

It is hoped that the map accompanying this paper will prove useful, while the following short description of some of the principal collecting stations, as visited by us, may prove of interest (see also Journ. Fed. Malay States Mus. x, Part 2, 1920, pp. 66-80).

Places visited on the Present Expedition: January 28—April 28, 1919.

PULAU MOHEA OR PULAU TUPAI.

A twin island with a shallow and narrow dividing strait. The western island rocky and with tall cliffs to the south and west: the eastern island lower and more flat. Both islands heavily timbered in places. Situated on a coral bank of small extent in 20-25 fathoms, about 20 miles off the coast of Trang. Very dry, with water-courses dried up at the time of our visit, though there is said to

1. Journ. F. M. S. Mus. x, part 3, 1921, pp. 203-213.

be a waterfall from the top of the western island to the sea in wet weather. General formation, sandstone.

We obtained little of interest: a new form of dwarfed *Sciurus caniceps*, with representative races on each islet; green pigeon, *Muscadivores aenea*, *Caloenas nicobarica*; two species of sunbird; and a mangrove flycatcher; while we saw crows and sea-eagles and heard a hawk-owl. We stayed here two nights.

KOH PIPIDON.

A limestone island in Ghirbi Bay, near Puket, about ten miles from the shore, the eastern side fairly flat and covered with heavy jungle amongst which immense Aroids, 12–18 ft. high (*Colocasia*), were growing. The western side, a magnificent crag of variegated greyish limestone almost marble in parts: on this crag the vegetation was interesting but little was in flower. We noticed some large *Dracaena*, *Euphorbia quadrangularis* and masses of the huge orchid, *Stauroopsis gigas* Bentham.

We obtained little of interest—a new squirrel, a bat or two and a few common birds; and noted, but did not obtain, two species of *Collocalia* and *Hirundo badia*.

JUNK SEYLON or PUKET or TONGKA.

Three hours steam from Koh Pipidon. On the present occasion we stayed three days coaling and taking in water, which was bad and hard to obtain; but did not collect, as the island had been thoroughly worked by a party of ours the year previously. We noted vultures in numbers (*Pseudogyps bengalensis*) feeding on offal in the town, and one or two King Vultures (*Otogyps calvus*) outside the actual town.

PANG-NGA OR PUNGA.

On our way north we visited Pang-nga, at the head of the bay, and some miles up a muddy river lined with mangrove and dotted here and there with limestone rocks. The town is picturesquely situated between tall limestone cliffs, with a clear rippling stream running between, but had recently been burnt down. On its outskirts was a cool and shady Wat or Siamese temple.

On our way north we passed through the straits separating

Tongka and the mainland, only two hundred yards wide and, according to the Admiralty Sailing Directions, reported to have a bar dangerous even to small craft such as ours, drawing little more than six feet of water. On this occasion the passage proved simple and we could have easily piloted our boat out ourselves, instead of, as it turned out, wasting an unnecessary and exorbitant fee on an ancient and decrepit Chinaman who took us over the shallows.

TAKUATUNG.

Our next stop was at Takuatung, a deep and sheltered inlet, where we collected on a hilly cape forming the west side of the inlet, the eastern shore being a long sweep of dazzling white sand, edged with noble casuarinas, while further inland the shores of the inlet degenerated into mangrove swamp. We stopped a couple of days and obtained two species new to the Malay Peninsula proper, viz, *Perierocotus peregrinus* and *Palaeornis fasciata*. Mammals were scarce and uninteresting.

TAKUAPAH.

Some miles up the coast from Takuatung is Takuapah, another deep inlet. It has three entrances, but only the northernmost is safe and practicable at all seasons, the two other having dangerous bars, especially in the S. W. monsoon. About thirty miles up the inlet and some miles up the small river, navigable to small steamers, lies the mining town of Takuapah, capital of the province of the same name which exports a considerable amount of tin.

We stopped for three days in the inlet, to the north of an island which forms what is marked as Kopah Head on the charts, and anchored next further up the inlet at Koh Rah, a small eminence surrounded by mangrove and, further inland, *Melaleuca* trees. We obtained nothing of great interest in the inlet.

KOH YAM YAI AND KOH YAM NOI.

Leaving Takuapah we spent a night in the channel between these two islands, about 2 miles in extent, marked on the chart as the "Sugar Leaves." Nothing was obtained except Myna birds, *Gracula javana*, and Imperial pigeon, *Muscadivores aenea*, though other birds exist.

DE LISLE ISLAND.

Really one of the Mergui Archipelago; a large island five or six miles square of undulating surface higher to the S. and W. We anchored about the centre of the northern coast and spent a day collecting, the most interesting bird obtained being the Stone-plover (*Esacus magnirostris*), previously obtained by Kloss in another of the Mergui group and by myself in Bintang, Rhio Archipelago; but not hitherto obtained within the limits of the Malay Peninsula. We also trapped a form of *Rattus vociferans* which we had not obtained on any of the smaller islands to the southward.

RENONG RIVER.

After a tortuous course of a few miles through narrow channels, with strong tides, which caused us some anxiety (as the pilot, whom we had brought from Penang, but had not had occasion to use hitherto, inspired us with no confidence; the few accidents that had happened to us in the last few years cruising in these little-charted waters having invariably taken place while the boat was in charge of one of these native gentry), we arrived at Renong anchorage, a small and inconvenient one, in very shallow water between a small islet and the mouth of the river which, at low tide, is reduced to a dirty ditch. A broad mud-bank was between us and the shore.

We spent three or four days at Renong river, during which time our men collected on a small patch of hilly jungle at the north of the river, but obtained nothing of great interest. In the meantime we were transacting necessary business with the Siamese Governor of the province, residing at Renong, some miles up the river. This town is of considerable importance as a supply centre for several large and prosperous tin dredging concerns—mostly Australian—which are working in the vicinity.

We had here to arrange for firewood, which was dear and difficult to obtain: for water, which was exorbitant in price and abominable in quality: and for a pilot for the Pakchan, which in its upper course is encumbered with sand banks and rocks.

On the present occasion, more by good luck than knowledge, the man whom we obtained through the Harbour Master, Renong,

conveyed us without grounding more than once or twice as far as the Amphur's headquarters of Namchuk, beyond which he professed unable to go.

VICTORIA POINT.

During our stay at Renong we visited, on two occasions, Victoria Point, about 5 miles across the estuary. Victoria Point is the southernmost station of Burma, and is, or used to be, the headquarters of an officer of the Burma Commission, but since the war has been in charge of a Sub-divisional officer. There is a small wireless station at the top of the hill, which we visited. Since the working out of the Pearl beds, and the cessation of mining at Malewon, there is little activity of any kind in the place, and hardly anything is to be obtained in the way of stores. A little Para rubber is planted in the neighbourhood, notably on Victoria Island opposite the settlement.

NAMCHUK.

We left Victoria Point at about 10 a.m., and after one or two difficulties with shoals arrived at Namchuk, which is the seat of an Amphur or district officer, at about 4.30. Here we found the local population busy tidying up the place in preparation for a visit from the Lord-Lieutenant of the province, who was expected on a tour of inspection on the morrow. The neighbourhood of Namchuk is open country, mainly ricefields and village lands, but we obtained a few interesting birds including the rare eagle, *Spizaetus nepalensis*, and the beautiful harrier, *Circus melanoleucus*.

Next day, as our pilot professed to be unable to take us further, we took the boat and prospected the river up to Tapli, distant about 10 miles, and found ample water as far as the foot of a small hill called Mamoh, though the depths were variable and there were rocks in mid-channel. We started next morning on the rising tide and reached Mamoh safely, though not without a nasty bump over a flat rock which put our hearts in our mouths, but fortunately did no damage to our lightly-scantled craft.

MAMOH.

There is a small hill here with patches of evergreen jungle, on which we collected for a few days while re-sorting our outfit and mak-

ing ready for our land journeys, as we had decided to send back the launch. We got but little at Mamoh.

TAPLI.

We accordingly moved on to Tapli, the terminus of the road across the Isthmus of Kra, where we met the Lord-Lieutenant who treated us with great courtesy. Here we found quarters in a large hard-wood house built originally for the King of Siam when traveling across the Peninsula.

We stayed at Tapli longer than we anticipated though we obtained a few species that we were anxious to possess from this area, notably the broadbill, *Serilophus lunatus*, and a specimen of the long-billed partridge, *Rhizothera longirostris*. After some difficulty we secured ten elephants, the only method of transport in this district, but we had loads for twenty, so that our men and equipment had to leave for Tasan, our next stopping place, distant about twelve miles and slightly on the eastern side of the Peninsular divide, in two detachments.

Compared with Indian and Burmese elephants, we had always been accustomed to consider the Malay elephant, as used in the north of the Federated Malay States, a poor and inefficient baggage carrier. An average animal can, however, be expected to carry a load of four to five pikuls* and do twelve to fourteen miles a day over ordinary country. The same is true of Patani and Bandon animals, though the howdahs and panniers are inconvenient for carrying light and miscellaneous loads.

The local elephants, mostly from the province of Chumpon, were inferior creatures, with cranky and ill-devised panniers. Their mahouts protested vigorously if they were expected to carry more than $1\frac{1}{2}$ –2 pikuls, and I do not think there was one that took as much as three. Their only merit was that they would do a fairly long day's march.

For the last three years a cart road has been under construction from Tapli (which is the highest navigable point on the Pakchan, for boats of moderate draught), to Chumpon on the Bangkok railway. The total length of the road is about 36 miles and the earth-

* 1 pikul = $133\frac{1}{3}$ lbs. av.

work is now complete, while the road is also metalled in parts. Except for the fact that the bridges are temporary and much below the general level of the formation, the road would even now be available for light motor cars in dry weather. For the last few months the work had been under the supervision of the Siamese Department of Ways, but it seems doubtful when the road will finally be open to traffic. The route practically follows the line of the Kra ship-canal—a project much mooted in the first half of the 19th century. Though the summit level is low, less than 300 feet, the country is very rugged, and it does not require the eye of an engineer to see what a stupendous undertaking a sea-level canal would be, rivalling even the Panama Canal, while lack of adequate water would probably render a lock system impossible. The idea, however, has long entered the limbo of forgotten and chimerical projects and is not likely ever to be renewed.

From Tapli the road follows the river to the village of Pakehan through rice fields, a distance of some $2\frac{1}{2}$ –3 miles. It then leaves cultivation and runs for some miles through dry, thorny and deciduous jungle, lacking in interest, until it reaches a narrow gorge, with a pleasant little stream purling through it, where the vegetation is more of an evergreen character. This is maintained to the summit level, about ten miles from Tapli, and on to Tasan about a mile further.

TASAN.

Tasan, which is in the province of Chumpon and outside the Monthon of Puket in which we had hitherto been working, is pleasantly situated among low hills covered with evergreen forest at the confluence of two clear-water streams, and had been made his headquarters by the Engineer-in-charge of the road, who courteously assisted us in many ways. Here, by the banks of the lesser stream, in the shade of some large trees, we established a camp which was cool and pleasant and free from intrusion. We collected many interesting species of birds, mammals and reptiles, including the rare warbler, *Tribura*, the clouded leopard, *Felis nebulosa*, and the most northerly known specimen of the long-nosed squirrel, *Rhinosciurus*,

while we added the reptilian genus, *Tropidophorus*, a scink of semi-aquatic habits, to the fauna of the Malay Peninsula.

After exhausting the possibilities of this place we moved on to Chumpon, encountering the same difficulties about transport as we had from Tasan, but this time in an accentuated degree, as the distance to be traversed was greater and, as before, we had to use two detachments.

We ourselves and most of our men walked, and though the distance, 22 miles, was comparatively trifling, we all agreed that we had seldom undertaken a more trying march. The first few miles, through open and semi-deciduous forest in the early part of the day, was pleasant enough, but the last twelve or thirteen miles was through open country, utterly without shade, over a somewhat sandy road, in a temperature that approached, if it did not exceed, 100° F. We were never more delighted than when we saw in the distance the big iron girder bridge that carries the railway over the Chumpon river. We arrived at the Chumpon rest-house utterly exhausted.

CHUMPON.

Chumpon is a considerable town, the head-quarters of a province and the seat of a Governor. It is situated in the middle of a large plain with some low, lalang-covered hills to the north and about 5-6 miles from the sea. The population in the vicinity, which is pure Siamese unmixed with Malay, appears fairly dense and is devoted to the cultivation of rice. As everywhere in Siam, a large proportion of the petty traders are Chinese or Indian, and there are a good many Chinese fishermen at the river mouth.

We remained here two or three days, sending back such of the collections, as were dry, to Kuala Lumpur in charge of one of the men who had fallen sick.

We also called on the Governor and made arrangements through him for our accommodation at Koh Lak, a sea-side place some 100 miles to the north, which was to be our next collecting station. We did no collecting at Chumpon, but through the kindness of Mr. Daniels, the Section Engineer, who was very hospitable to us, we obtained the *remains* of a hare, which registers the southernmost limit of *Lepus siamensis*.

Through the courtesy of the Governor we made an excursion by motor boat to the river mouth, which is a large fishing centre. At the time of our visit not much work was being carried on, but the methods consisted of seines of various kinds, dip-nets and fish-traps, several of widely different kinds from these used in Malaya. The rail from Chumpon to Koh Lak (now called Prachuap Kirikan) runs through fairly varied country, but in this region, comparatively near the coast, we had entirely left evergreen forest, which only exists on the higher slopes of the hill ranges forming the boundary of Siam and Lower Tenasserim. Much of the country was undulating low hills, covered with *lalang* and other coarse grasses, but as the time of our visit was approaching the end of the dry season, everything was much burnt up and desiccated. Elsewhere was flatter country covered also with coarse grass or large patches of scrub, amongst which a tall and uncommonly thorny bamboo was extremely prominent. Occasionally we passed isolated and precipitous limestone hills arising abruptly from the plain and which, while the line was being built, formed a most convenient source of ballast. In places there were small fields of rice and buffalo-grazing lands, but the general aspect of the country, with the exception of the district round Bangtaphan, was one of great poverty and desolation.

Tradition has it that in the early part of the 19th century one of the terrific storms, which on rare occasions visit this coast, blew down much good forest that originally grew in the district. This destruction was accompanied by fires from which the land never recovered and, owing to the denudation during wet season, has progressively deteriorated ever since. Much of the country, however, looks as if it might be at least as well adapted for stock raising as parts of tropical Australia, in which that industry has been found successful.

KOH LAK.

On arrival at Koh Lak we were met by a representative of the Governor and inducted into quarters in a pleasant little house on the beach. These we occupied for some days, but had to vacate on the rumours of the arrival of personages from Bangkok, who,

however, never eventuated. The substitute quarters, though not so comfortable or well situated, served our purpose sufficiently well. Koh Lak, or Prachuap Kirikan as it is now officially called, is a large sandy bay with rocky limestone headlands or islands connected to the shore at each end. Behind are saltings, low thorny scrub and a certain amount of mangrove beyond the bay.

The place is much used as a watering place by the princes and nobility from Bangkok and is often crowded.

We stayed here nearly a fortnight and made large additions to our collections, including some interesting squirrels, a *Lepus siamensis* and, among birds, 2 species of jacana and a large series of a little *Gerygone* on which a new species had been erected by Count Nils Glydenstolpe. Very little fishing appeared to be done in the bay, and food of all kinds was dear owing to the number of visitors, while the quality of the water was indifferent.

HAT SANUK.

After our stay at Koh Lak we decided to move a few miles into the interior to a place called Hat Sanuk, which had been visited by Count Nyls Glydenstolpe and which was reported to be a good collecting ground. The usual difficulties about transport occurred, but eventually we received fourteen of the local country carts drawn by bullocks or buffaloes.

The track led at first through saltings liable to be inundated in the wet season, then through open country studded with clumps of thorny bushes and, in places, through a dry and stunted jungle. Everything was parched and dried up, and the rough track was inches deep in a fine impalpable dust that was raised in clouds by the carts, and made walking in their vicinity very disagreeable. Towards noon we reached a small village surrounded by groves of thorny bamboo, through which a pleasant little stream ran. Here we had to stop four hours as the draught cattle cannot work during the middle of the day in the hot season.

The route then led through open grassy country with scattered trees (some, of a very beautiful species of *Lagerstroemia*), and clumps of bushes, and eventually entered true jungle, through which

we passed for some miles, eventually reaching Hat Sanuk at dusk.

Our bullock-cart drivers had evidently taken us by a very circuitous route, hoping to make a two days journey. The forest in which Hat Sanuk is situated is, to those used to the Malayan equatorial jungles, of very peculiar type. On the higher ridges and dryer parts it is in the main composed of two trees only:— a stumpy holly-like tree, *Balanostreblus ilicifolia* and *Euphorbia quadrangularis*. Near the water courses there was an abundance of big trees, chiefly species of *Ficus*, but we noticed no, or hardly any, *Dipterocarpaceae*, which are the characteristic feature of virgin jungle in the dryer parts of the Malayan lowland forests. The tops of the trees were in places covered with the long trailing pseudo-bulbs and flower-spikes of the beautiful orchid, *Vanda teres*, of which thousands of blooms could have been plucked in a few minutes. Less common, but still abundant, was the scarlet *Renanthera coccinea*, and another species of the same genus with yellow, brown and white petals.

We camped for some days at Hat Sanuk near a sluggish stream of indifferent water which was rapidly drying up. Many interesting species of birds were obtained, including several new records for the country. Perhaps the most interesting was a silver pheasant, *Gennaesus n. sharpii*, of which we were unfortunate in only obtaining the female. Dry weather made stalking of any kind impossible and the pheasants were very shy.

Big game, including elephants, rhinoceros and wild cattle, as well as pig, sambur and barking deer, were abundant in the district, and game tracks ran in every direction.

After Hat Sanuk the time we could spare for field work expired, and we made the best of our way back to Kuala Lumpur, stopping a couple of days at Singora which, in its way, is one of the most beautiful places in the Malay Peninsula.

Throughout the trip, from leaving Penang on January 30th to our return to Kuala Lumpur at the end of April, we had no rain with the exception of a few showers passing through Koh Lak on our return. The heat was intense, and in the Pakchan river, where however it was mitigated by dense white fogs, which lasted sometimes as late as 8.30 a.m., it quite prostrated some of our Malay crew.

The result of our work shows that, so far as Siam is concerned, the Malayan fauna stops short at the Pakchan river, whence, at low levels northward, it is purely Indo-Burmese. What the fauna is on the high dividing range between Siam and Tenasserim, which in places reaches 5,000 feet, we are unable to say; but from a distance the range does not look heavily forested. Possibly it may contain forms identical with those of Nwalabo and Muleyit, possibly more southern forms; but everything is necessarily pure conjecture.

In Tenasserim, on the other hand, the Malayan fauna continues almost undiluted as far as Tavoy. Its greater extension on this side, it is perhaps trite to remark, is evidently connected with the persistence of evergreen forests which, again, is due to the apparently much heavier rainfall on the western than on the Siamese side.

OTHER LOCALITIES.

In the various papers on collections made by us in this region, references to which will be found in the bibliography, brief accounts will be found of the various collecting stations, which are not specifically mentioned in the preceding pages. We do not think it necessary to repeat these accounts.

GALLIFORMES.

GAME BIRDS.

1	{	With three toes only	...	...	...	2
		With four toes	...	...	...	3
2	{	Breast barred across...	...	<i>Turnix pugnax plumbeipes.</i>		
		Breast uniform in centre	...	<i>Turnix tanki blanfordi.</i>		
3	{	Large birds, wing 13 inches or over	...	...	...	4
		Medium sized birds, wing 12-18 inches	...	...	...	5
		Small birds, wing 8 inches or less	...	...	...	9
4	{	Crested; upper tail-coverts forming a train				
		exceeding the tail feathers in length	...	<i>Pavo muticus.</i>		
		Not crested; tail coverts normal	...	<i>Argusianus argus.</i>		
5	{	With metallic ocelli in the plumage	...	...	...	6
		With no metallic ocelli	...	...	...	7
6	{	Greyer, with no metallic sheen on crest		<i>Polyplectron bicalcaratum.</i>		
		Browner, with metallic sheen on crest		<i>Polyplectron malaccensis.</i>		
7	{	Head uncrested	...	<i>Gallus ferrugineus ferrugineus.</i>		
		Head crested	...	...	...	8
8	{	Without wattles	...	<i>Gennaeus lineatus sharpei.</i>		
		With wattles	...	<i>Lophura rufa.</i>		
9	{	Crested	...	<i>Rollulus roulroul.</i>		
		No crest	...	...	...	10
10	{	Legs of the male armed with a spur	...	...	...	11
		Legs of the male spurless	...	...	...	13
11	{	Hind toe with a claw	...	...	...	12
		Hind toe with a small nail only		<i>Caloperdix oculea.</i>		
12	{	Throat rufous	...	<i>Rhizothera longirostris.</i>		
		Throat white	...	<i>Francolinus pintadeanus.</i>		
13	{	Tail with 14 feathers, exceeding the tail coverts	...	...	...	14
		Tail with 8 feathers, concealed by the coverts		<i>Excalfactoria chinensis.</i>		
14	{	With the patch of silky feathers beneath the wing, white		...	...	15
		With the patch of silky feathers beneath the wing, grey		<i>Arboricola brunneipectus.</i>		
15	{	With marked chestnut neck-patch and black post-auricular patch	...	<i>Tropidoperdix charltoni.</i>		
		With no marked chestnut neck-patch and black auricular patch	...	<i>Tropidoperdix chloropus.</i>		

1. *Francolinus pintadeanus* (Scop.).

Tetrao pintadeanus, Scop., Del. Flor. et Faun. Insubr. ii, 1786, p. 93 (Bourbon); Oberholser, Proc. Biol. Soc. Washington, 32, 1919, p. 21.

Francolinus chinensis, G., p. 151 (Ratburi and Petchaburi).

The above citation by Gairdner, without any details of exact locality of specimens obtained, is the only authority for the occurrence of the Francolin within the limits now dealt with. In Tenasserim it only occurs in the extreme north, but is apparently not uncommon near Bangkok, though whether the bird is really wild there is strongly queried.*

This is the species known hitherto as *Francolinus chinensis* — a name which Oberholser has shown to be untenable.

2. *Rhizothera longirostris* (Temm.).

Perdix longirostris, Temm., Fig. et Gall. iii, 1815, pp. 323, 721 (Sumatra).

Rhizothera longirostris, Inglis, Journ. Nat. Hist. Soc. Bombay, xxvi, 1918, p. 291 (Bokpyin, S. Tenasserim); M.1, p. 35 (Patiyu).

♀. Tapli, Pakchan Estuary, Peninsular Siam. 9 March, 1919. [No. 4528].

"Iris chocolate; bill black; feet pale whitish yellow."

Total length 370; wing 195; tail 85; tarsus 54; bill from gape 33 mm.

This bird was shot in dry bamboo jungle and is the second record for the kingdom of Siam, though it is doubtless common in Patani. It agrees exactly with birds of the same sex from Selangor and Pahang. The northernmost record is the specimen recorded above from S. Tenasserim.

3. *Tropicoperdix charltoni* (Eyton).

Perdix charltonii, Eyton, Ann. and Mag. Nat. Hist. xvi, 1845, p. 230 (Malacca).

*We are now of opinion that Williamson's entry of this species in his "Preliminary List of the Birds of Bangkok" was incorrect, and that the bird does not occur in the neighbourhood of Bangkok in a really wild state. Vide Vol. i, pp. 47 and 120 of this Journal.—Eds.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. 1. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

Arboricola charltoni, H., pp. 15, 86 (Perlis and Bandon).

Tropicoperdix charltoni, M. 1, p. 35 (Patiyu).

2 ♂. Ban Kok Klap, Bandon, Peninsular Siam. June, July, 1913.

"Iris dark hazel; bill blackish, yellowish green at tip of lower mandible; reddish at base; orbital skin reddish orange; tarsi and claws waxy yellow."

The species was common in dry jungle at the above locality. Common in north and central Perak.

4. *Tropicoperdix chloropus* Blyth.

Tropicoperdix chloropus, Blyth, Journ. Asiat. Soc. Bengal, xxxviii, 1859, p. 415 (Tenasserim).

Arboricola chloropus, A., p. 444; G., p. 151 (Ratburi & Petchaburi).

2 ♂, ♀. Hat Sanuk, nr. Koh Lak, S. W. Siam. 16-19 April, 1919. [Nos. 5338, 5407, 5408].

"Iris brown; orbital space dull maroon; bill sage green distally, dull red basally; feet and claws clear sage green".

Total length ♂, 252, 285; ♀, 265; wing ♂, 152, 153; ♀, 146 (worn); tail ♂, 80, 75; ♀, 68; tarsus ♂, 33, 40; ♀, 38; bill from gape ♂, 21, 22; ♀, 20 mm.

Shot by our Dyaks in dry jungle: these specimens constitute a southerly record for the species.

5. *Caloperdix oculea oculea* (Temm.).

Perdix oculea, Temm., Pig. et Gall. iii, 1815, pp. 408, 732 (India: here restricted to central parts of Malay Peninsula).

Caloperdix oculea, A., p. 449 (Bankasoon); G. ii, p. 329; F., p. 671 (Trang); H., p. 87 (Bandon); G., p. 151 (Ratburi and Petchaburi); Hume, Stray Feathers, ix, 1880, p. 121 (Takuapa).

Caloperdix oculea oculea, M. 1, p. 35 (Patiyu).

We did not on this occasion obtain this partridge in Peninsular Siam, though we saw the remains of recently trapped specimens at Tasan. It is common in Trang and Bandon in bamboo and secondary jungle and still more so in the state of Perlis on the international boundary. In the Federated Malay States it is extremely rare and only known from high elevations.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

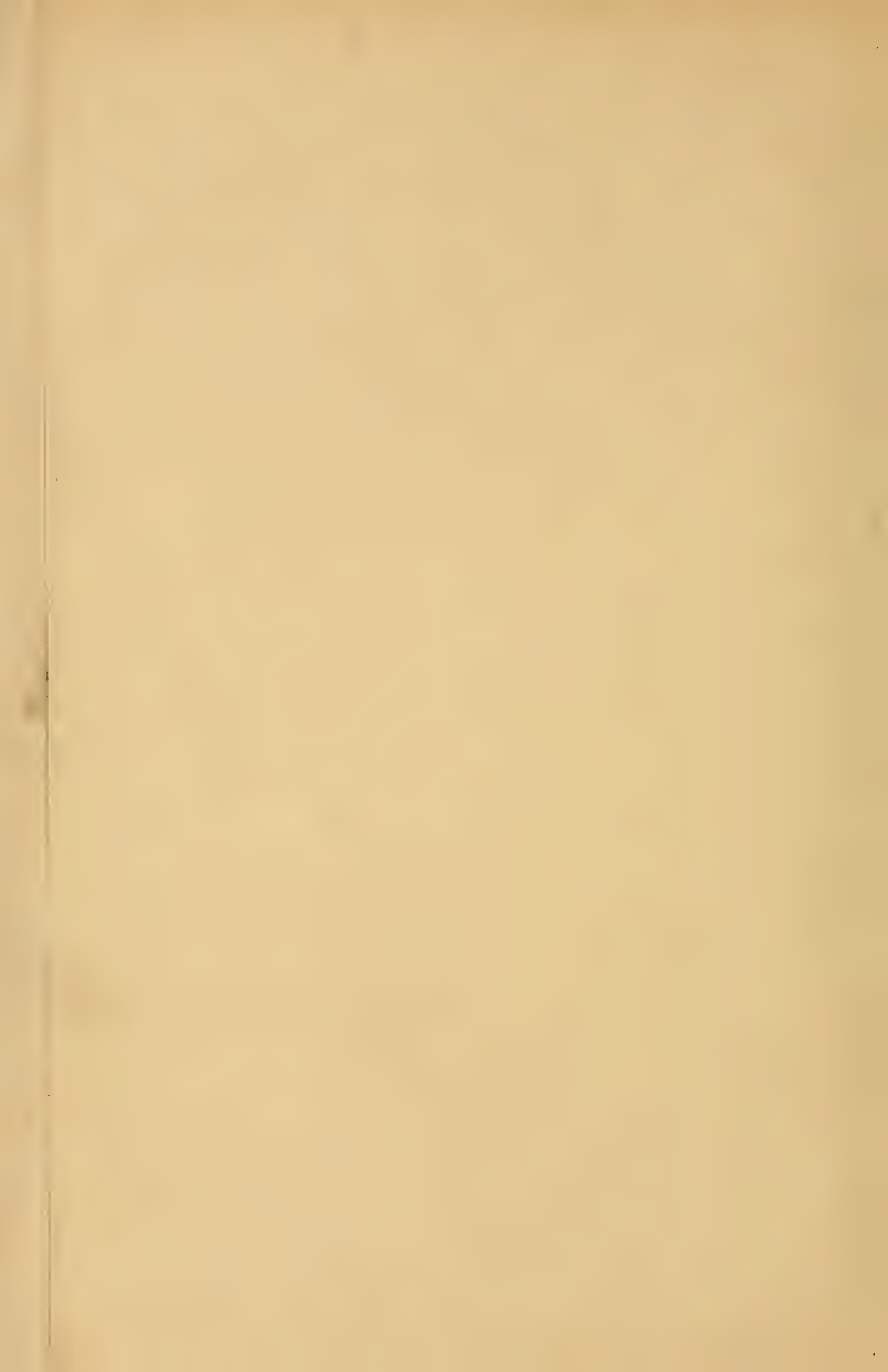
E. O. Grant, Fascioli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.





Arboricola brunneipectus brunneipectus Tickell.

Arboricola brunneipectus, Tickell, Journ. Asiat. Soc. Bengal, xxiv, 1855, p. 276 (Tenasserim Mountains); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 32 (Sai Yoke, W. Siam).

The specimen recorded by Mr. Williamson comes from a locality so near our northern boundary that the species will almost certainly be found, sooner or later, within our area.

6. Rollulus roulroul (Scop.).

Phasianus roulroul, Scop., Del Flor. et Faun. Insubr. ii, 1786, p. 93 (Malacca).

Rollulus roulroul, A., p. 448 (Bankasoon, etc.); C ii. p. 330; H., p. 87 (Bandon); G., p. 151 (Ratburi and Petchaburi); M. 1, p. 34 (Tung Song).

♀. Tang Pran, Takuatung, W. Coast Siam. 14 February, 1919. [No. 3987].

♀. Tasan, Pakchan Estuary, Peninsular Siam. 16 March, 1919. [No. 4622].

"Iris hazel; bill black; eyelid carmine; feet coral; post-orbital patch lake".

Total length 260, 277; wing 133, 132; tail 64, 64; tarsus 39.5, 42.5; bill from gape 23, 21 mm.

Though very common indeed in the south of the Peninsula, this wood partridge rapidly grows rarer in more northern latitudes: it is strictly confined to dense evergreen forests and has a wide range in altitude.

7. Excalfactoria chinensis chinensis (Linn.).

Tetrao chinensis, Linn., Syst. Nat. i, p. 277 (1766).

Excalfactoria chinensis, A., p. 447 (Pakchan, etc.); C.ii, p. 334; D., p. 77 (Jalor, Patani).

Excalfactoria chinensis chinensis, M.1, p. 34 (Patiyu).

Common throughout the area in suitable localities, especially between Patani and Singora, though there are very few records.

8. Lophura rufa (Raffles).

Phasianus rufus, Raffles, Trans. Linn. Soc. xiii, 1822, p. 321 (Sumatra).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F.M.S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N.H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N.H. Soc. Siam, iii, 1919.

(second part).

M.1. Baker, Journ. N.H. Soc. Siam, iv, 1920.

(third part).

Phasianus castaneus, Gray in Griffith's Cuv. Anim. K., iii, 1829, p. 25.

Euplocamus vieilloti, A., p. 431 (Pakchan); B, p. 160 (Junk Seylon); C.ii, p. 320.

Lophura rufa, L., p. 89 (Ghirbi); M 1, p. 34 (Patiyu).

♀ ad. (capt.). Tasan, Chumpon, Peninsular Siam. 7 March, 1919. [No. 4469].

"Iris red, orbits smalt; bill bluish horn, lower mandible yellowish; feet coral pink".

Total length 540; wing 265; tail 220; tarsus 91; bill from gape 48 mm.

This species was said to be common in the heavily wooded area near Tasan, though we never came across it ourselves. Our specimen was presented by Mr. L. Giacone, of the Siamese Department of Ways, who had several females in captivity; southwards it is not uncommon in Perlis, but in the Federated Malay States and further south it is very rarely met with.

In adult males from Perlis and Ghirbi the flank shaft-stripes are pure white: in a half grown male from the former locality they are deep buff, becoming white anteriorly.

9. *Gennaeus lineatus sharpii* Oates.

Gennaeus sharpii, Oates, Manual Game Birds, i, 1898, p. 357 (Hills between Burma and Siam); Ibis, 1903, p. 101.

Gennaeus andersoni, Ogilvie Grant (nec. Elliot), Cat. Birds Brit. Mus. xxii, p. 306 (1893).

Gennaeus lineatus sharpii, Stuart Baker, Journ. Nat. Hist. Soc. Bombay, xxiii, 1915, p. 678; *id. op. cit.*, xxv, 1918, p. 336 (Raheng: Korat).

Gennaeus lineatus lineatus, L., p. 158 (Hat Sanuk).

Gennaeus sp.? *sharpii*, G., p. 151 (Ratburi and Petchaburi).

♀ ad. Hat Sanuk, nr. Koh Lak, S. W. Siam. 19 April, 1919. [No. 5409].

"Iris rich ochreous brown; bill greyish horn, greenish at base of lower mandible; feet and orbits crimson, soles yellow-grey."

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Total length 565; wing 236; tail 228; tarsus 68; bill from gape 33 mm.

We think that there can be but little doubt that this pheasant is referable to the above race, which has an extensive range down the hill-ranges between Burma and Siam. Our specimen agrees closely with those described and identified by Ogilvie Grant as *G. andersoni*, which subsequently formed part of the material on which the present race was founded by Oates. Gyldenstolpe obtained no females, while owing to dry weather we were unable to obtain a series, as the birds were so wild as to be unapproachable. A scapular feather picked up in the track was pure white, with very narrow lineated black bars parallel to the edge of the feather.

The undersurface of our bird is brownish black, with a broad white shaft-stripe and a broad subterminal V-shaped white bar on each feather: there is no trace of rufous on the mantle which, with the nape, has a narrow white shaft and a broader white V-shaped band on each feather, edged posteriorly with blackish.

10. *Gallus ferrugineus ferrugineus* (Gm.).

Tetrao ferrugineus, Gm., Syst. Nat. i, pt. 2, 1788, p. 761 ("China").

Gallus ferrugineus, A., pp. 442, 521 (Pakchan); B., p. 80 (Puket); G., p. 151 (Ratburi and Petchaburi).

Gallus gallus, E., p. 122 (Patani); H., p. 57 (Bandon); I., p. 157 (Hat Sanuk); L., p. 89 (Junk Seylon); K., p. 51 (Koh Lak).

Gallus bankiva, Selater, F., p. 672 (Trang).

Gallus bankiva bankiva, Stuart Baker, Journ. Nat. Hist. Soc. Bombay, xxv, 1917, p. 18.

Gallus ferrugineus ferrugineus, Robinson and Kloss, Records Indian Mus. xix, 1920, p. 14; Kloss, *tom. cit.*, p. 151.

7 ♂ 5 ♀. Tasan, Chumpon, Peninsular Siam. 13 and 19 March, 1919. [Nos. 4563-5, 4571, 4588, 4678, 9; 4687-91].

♀, pull. Koh Lak, S. W. Siam. 2 and 4 April, 1919. [Nos. 5004, 5021].

"Males. Iris orange; bill pinkish at base, blackish horn on culmen, etc.; feet lead; lappets and comb pinkish red."

"Females. Iris dull orange; bill greyish horn; feet lead-grey."

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Males. Total length 670, 542, 532, 630, 675, 504, 480; wing 228, 224, 222, 223, 237, 226, 220; tail 337, 243, 305, 304, 343, 180, 175; tarsus 73, 70, 79, 73, 75, 76, 70; bill from gape 31, 32, 34, 30, 28, 30, 27 mm.

Females. Total length 462, 438, 403, 440, 435, 468; wing 206, 192, 195, 196, 192, 220; tail 160, 148, 148, 145, 140, 158; tarsus 57, 63, 56, 60, 62, 64; bill from gape 26, 26, 25, 26, 28, 27 mm.

Common throughout the area dealt with, in the usual situations at the edge of cultivation and in secondary jungle. Especially numerous at Tasan, where at the time of our visit they were breeding, the clutches being of five to seven eggs.

11. *Polyplectron bicalcaratum* (Linn.).

Paro bicalcaratus, Linn., Syst. Nat. i, 1766, p. 268 (China).

Polyplectron tibetanum, A., pp. 432, 521 (Nwalabo).

Polyplectron chinquis, Ogilvie Grant, Cat. Birds Brit. Mus. xxii, 1893, p. 357 (Mergui and Nwalabo); G., p. 151 (Ratburi and Petchaburi).

Polyplectron bicalcaratum, Stuart Baker, Journ. Nat. Hist. Soc. Bombay, xxiv, 1916, p. 209.

Polyplectron malaccensis, I., p. 158 (Koon Tan).

Polyplectron bicalcaratum chinquis, M.I, p. 33 (Patiyu).

The only definite records for our area are those of Gairdner and Stuart Baker, *loc. cit. supra*. Gyldenstolpe's ♀ from Koon Tan, N. Siam, referred to *P. malaccensis*, undoubtedly belongs here, as he specially mentions the outer tail-feathers as having ocelli on both webs.

12. *Polyplectron malaccense* (Scop.).

Phasianus malaccensis, Scop., Del. Flor et Faun. Insubr. ii, 1786, p. 93 (Malacca).

Polyplectron bicalcaratum, A., p. 434 (Mergui, Hills of South Tenasserim?) B., p. 80 (Puket).

Polyplectron malaccensis, Stuart Baker, Journ. Nat. Hist. Soc. Bombay, xxiv, 1916, p. 221 (South Tenasserim).

Though it is probable that the Peacock Pheasant is quite common in Patani, the only definite records are those of Müller and Stuart Baker given above.

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, Journ. N.H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

13. *Argusianus argus argus* (Linn.).

Phasianus argus Linn., Syst. Nat. i, 1766, p. 272 (Tartaria).

Argusianus argus, Hartert, Nov. Zool. ix, 1902, p. 538 (type locality fixed as Malacca); C.ii, p. 313; D., p. 78 (Patani); E., p. 123 (Rhaman); H., p. 87 (Bandon); Stuart Baker, Journ. Nat. Hist. Soc. Bombay, xxiv, 1916 p. 202; I, p. 158 (Koh Lak).
Argus giganteus, A., p. 427 (Pakchan).

Probably common in suitable localities in southern and south-western Siam, wherever there is hilly country covered with ever-green forest.

14. *Pavo muticus* Linn.

Pavo muticus, Linn., Syst. Nat. i, 1766, p. 268 (Japan); Hartert, Nov. Zool. ix, 1902, p. 538 (type locality designated as Java); A., p. 425 (Pakchan); C.ii, p. 312; E., p. 123 (Patani); F., p. 672 (Trang); H., p. 87 (Bandon); G., p. 151 (Ratburi and Petchaburi); L., p. 89 (Ghirbi).

In suitable county, i. e., in the scrub along river courses and at the edges of rice fields, Peafowl are spread throughout Peninsular and Lower Siam. They are usually in full feather in January or February, while the trains are completely shed in June and July.

15. *Turnix pugnax plumbipes* (Hodgs.).

Hemipodius plumbipes, Hodgs., Bengal Sporting Mag. 1837, p. 346 (Nipal).

Turnix plumbipes, A., p. 450 (Bankasoon); B., p. 81; C.ii, p. 337.

Turnix taigoor, D., p. 79 (Patelung & Patani States); E., p. 122 (Patani); H., p. 140 (Koh Pennan & Koh Samui).

Turnix pugnax plumbipes, Stuart Baker, Journ. Nat. Hist. Soc. Bombay, xxiii, 1914, p. 395; L., p. 89 (Ghirbi & Puket).

Our series is not large and is deficient in females, but males from the islands in the Bandon Bight can be matched by others from the south of Pahang.

16. *Turnix tanki blanfordi* Blyth.

Turnix blanfordi, Blyth, Journ. Asiat. Soc. Bengal, xxxii, 1863, p. 80 (Pegu).

Turnix maculosus, A., p. 452 (Pakchan & Bankasoon); C.ii, p. 335.

Turnix tanki blanfordi, Stuart Baker, Journ. Nat. Hist. Soc. Bombay, xxxii, 1915, p. 601.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

♂. Tasan, Chumpon, Peninsular Siam. 23 March, 1919.
[No. 4796].

2 ♂, ♂ imm. Koh Lak (Prachuap-kirikan), S. W. Siam.
5 April, 1919. [Nos. 5078, 9].

"Iris white; bill dark horn, yellow on tomia and basal half of lower mandible; feet yellow, toes darker".

Total length 161, 158, 165; wing 80, 90, 88; tail 33, 30, 34;
tarsus 23, 23, 25; bill from gape 18, 17, 17 mm.

Tasan and the Pakchan estuary represent the southernmost limit of this Quail; we found it common in grass-lands at Tasan and Koh Lak and between that place and Hat Sanuk.

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| A. Hume & Davison, <i>Stray Feathers</i> , vi, 1878. | E. O. Grant, <i>Fasciculi Malayenses</i> , iii (Birds), 1905. |
| B. Müller, <i>Die Ornis der Insel Salanga</i> , 1882. | F. Robinson and Kloss, <i>Ibis</i> , 1910-11. |
| C. Oates, <i>Birds Brit. Burmah</i> , Vols. i & ii, 1883. | G. Gairdner, <i>Journ. N. H. Soc. Siam</i> , i, 1915. |
| D. Bonhote, <i>P. Z. S.</i> 1901, Vol. i. | H. Robinson, <i>Journ. F. M. S. Museums</i> , v, 1915. |

COLUMBIFORMES.

PIGEONS.

1	{ Large birds, wing more than 8 inches	2
	{ Smaller birds, wing less than 8 inches	5
2	{ With elongated hackles on hind neck	<i>Caloenas nicobarica.</i>
	{ Feathers on hind neck normal	3
3	{ General colour lead-grey	<i>Columba livia intermedia.</i>
	{ General colour ivory-white	<i>Myristicivora bicolor.</i>
	{ General colour above bronzy green	<i>Muscadivora aenea.</i>
	{ General colour above maroon or liver-brown	4
4	{ Breast grey, rump uniform with back	<i>Ducula badia</i> and <i>griseicapilla.</i>
	{ Breast ochraceous, rump grey contrasting with back	<i>Alsocomus puniceus.</i>
5	{ Always with metallic bronzy green in plumage	<i>Chalcophaps indica.</i>
	{ Always with non-metallic green in plumage	6
	{ Always without any green in plumage	13
6	{ Wing exceeding 7 inches	<i>Butreron capelli.</i>
	{ Wing less than 7 inches	7
7	{ With a magenta cap or magenta wash on crown	<i>Ptilonopus jambu.</i>
	{ With no magenta cap or wash	8
8	{ Bill swollen towards tip	<i>Treron curvirostra nipalensis.</i>
	{ Bill slender, not swollen towards tip	9
9	{ Wing less than 5 inches	<i>Treron olax.</i>
	{ Wing more than 5 inches	10
10	{ Middle feathers of tail green	11
	{ Middle feathers of tail grey	12
11	{ Tibial plumes bright chrome yellow	<i>Treron fulvicollis.</i>
	{ Tibial plumes buff or dull yellow	<i>Treron pompadrea phayrei.</i>
12	{ Pale apical band to tail $\frac{1}{2}$ inch or more broad	<i>Treron bicincta praetermissa.</i>
	{ Pale apical band less than $\frac{1}{2}$ inch broad	<i>Treron vernans.</i>
13	{ With a black collar on nape	14
	{ With no black collar	15
14	{ Collar narrow and entirely black	<i>Oenopopelia tranquebarica humilis.</i>
	{ Collar broad and spotted with white	<i>Streptopelia suratsensis tigrina.</i>
15	{ Wing about 7 inches	<i>Macropygia leptogrammica.</i>
	{ Wing about 5.5 inches	<i>Macropygia ruficeps.</i>
	{ Wing about 4 inches	<i>Geopelia striata.</i>

17. *Butreron capelli* (Temm.).

Columba capelli, Temm., Pl. Col., 1823, pl. 143 (Java).

Butreron capelli, Anderson, Journ. Linn. Soc., Zool., xxi., 1887, p. 152 (Elphinstone Island, Mergui Archipelago); E., p. 122 (Patani States); F., p. 672 (Trang); Stuart Baker, 'Indian Pigeons and Doves, 1913, p. 64, pl. 4.

"Iris dark; eyelids green and yellow; bill pale greenish white; cere dull olive; feet ochre yellow".

Rare in Peninsular, and apparently not found in S. W. Siam.

18. *Treron curvirostra nipalensis* (Hodgs.).

Toria nipalensis, Hodgs. Asiat. Res. xix, 1836, p. 164, pl. ix (Nepal).

Treron nipalensis, A., p. 410 (Tavoy to Malewoon); C. ii, p. 306; F., p. 674 (Trang); G., p. 151 (Ratburi and Petchaburi); Stuart Baker, Indian Pigeons and Doves, 1913, p. 66, pl. 5; H., p. 140 (Koh Samui, Bandon); Buttikofer, Notes Leyden Museum, xxi, 1899, p. 266; I., p. 153 (Koh Lak).

Treron curvirostra nipalensis, J., p. 135 (Pulau Telibun); L., p. 90 (Junk Seylor).

♂, ♀. Koh Pipidon, W. Siam. 3 February, 1919. [Nos. 3929, 30].

♂. Pang-nga river, W. Siam. 11 February, 1919. [No. 3947].

♂. De Lisle Island, W. Coast Siam. 19 February, 1919.

[No. 4122].

♂, 2 ♀. Tapli, Pakchan Estuary, Peninsular Siam. 3-7 March, 1919. [Nos. 4392, 4412, 4466].

♂. Tasan, Chumpon, Peninsular Siam. 14 March, 1919. [No. 4586].

"Male. Iris, inner ring yellow, outer deep bronze, orbits verditer; bill, frontal half pale yellow-green, base crimson; feet magenta-lake or maroon".

Total length ♂, 248,—, 265, 248, 247; ♀, 260, 258, 257; wing ♂, 138, 133 (dry skin) 148, 138, 136; ♀, 143, 138, 136; tail ♂, 89,—, 90, 84, 92; ♀, 85, 80, 80; tarsus ♂, 19,—, —, 19.5, 16; ♀, 20, 18.5, 18; bill from gape ♂, 22,—, 20, 21, 20; ♀, 22, 23, 20 mm.

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Sdangia, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

A great deal of confusion has arisen over the races of the Thick-billed Green Pigeon. It appears to be borne out by the statements of all writers that the continental race southwards, to the northern third of the Malay Peninsula, is consistently larger than birds from the southern two-thirds of the Malay Peninsula, Sumatra, Borneo and Bangka. Palawan and Sulu birds are also stated to be larger.

Every area has its name, *viz* :—

Treron curvirostra Gm. ... 1788. Malay Peninsula, *terra typica* designated by Oberholser, 1912. Now restricted to Selangor.

Treron nipalensis Hodgson ... 1836. Nepal, etc.

Treron griseicauda Gray ... 1856. Java.

Treron nasica Schleg. ... 1863. Borneo and Sumatra (?)

Treron harterti Parrot ... 1907. N. E. Sumatra.

There are also other races from the Barussan Islands.

No one will probably dispute that the bird figured by Latham (Gen. Syn. Birds, ii, 1788, p. 632, pl. 59: and latinized by Gmelin as *Columba curvirostra*, Syst. Nat. i, 1788, p. 777) represents the first description of the species, though attached to a wrong locality (Tanna, New Hebrides). Unless we are prepared to recognize the mere references by Raffles and Vigors of Sumatran birds to *Columba curvirostra* (Gm.), as a fixation of the type locality, we are bound to admit *T. c. harterti* as the name for the Sumatran bird (if distinct from the Bornean and Javanese);* *T. c. nasica*† for the Bornean; *T. c. curvirostra* for the Malayan; and *T. c. griseicauda* for the Javan-

*Schlegel (Ned. Tijds. Dierk., i, 1864, pp. 67, 8) records both *griseicauda* and *nasica* from Sumatra.

†Some authorities, however, including Wallace, claim that *T. nasica* is a distinct species, occurring together with *T. curvirostra* and differing mainly in the colour of the soft parts.

L. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.	M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
J. Robinson, Journ. F. M. S. Mus. vii, 1917.	Baker, Journ. N. H. Soc. Siam, iii, 1919.
K. Kloss, Ibis, 1918.	(second part).
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.	M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part)

ese bird. We have been able to compare Bornean, Malayan, Siamese, Cochín-Chinese and Annamese specimens, and are certain that, broadly speaking, no real colour-distinction can be correlated with range, but the northern birds are undoubtedly on average larger than the Malayan.

The whole of the series of the Malay Peninsula, from its extreme northern limit to the islands south of Singapore, does not afford any bird approaching in smallness the minimum wing dimensions for *T. curvirostra* given by Stuart Baker (124 mm.), while some from the extreme south are as large as others from the extreme north.

On the whole, however, it is true that northern birds average larger than the southern. Rather than use the elaborate typography of Stresemann, we have recorded the northern birds within Siamese limits as *T. c. nipalensis*, while the southern birds are, by Oberholser's designation, typical *T. c. curvirostra*. For convenience sake we specify as a more exact type locality, Rawang, Selangor—as the Malay Peninsula is 800 miles long and contains two forms of the species.

In the Journ. Nat. Hist. Soc. Siam, iv, 1920, p. 31, Baker claims that Oberholser cannot select the Malay Peninsula for the typical locality of *T. c. curvirostra*, as he himself had already shown, in his "Indian Pigeons and Doves," that the correct type locality was Sumatra. Mr. Baker's claim, however, comes too late: his book was published in 1913, whereas Oberholser had already selected the Malay Peninsula in 1912. We, ourselves, do not consider that anything in Baker's remarks (*op. cit.*, p. 68) constitutes a fixation of type locality.

In any event Sumatra has been ruled out in this connection since 1907, as Parrot then described and named the island bird.

19. *Treron vernans vernans* (Linn.).

Columba vernans, Linn., Mant., 1771, p. 526 (Philippines).

Osmotreron viridis, B., p. 78 (Peninsular Siam).

Osmotreron vernans, C. i, p. 309 (Malay Peninsula); D., p. 76 (Patani); E., p. 122 (Patani); F., p. 674 (Malay Peninsula); H.,

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, *Ibis*, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

pp. 88,140 (Bandon, Koh Samui and Koh Pennan); J., p. 135 (Langkawi Islands); L., p. 89 (Ghirbi and islands).

Treron vernans vernans, M.I., p. 31 (Tung Song and Patiyu).

A common bird throughout our region in suitable localities.

20. *Treron bicincta prætermissa* Rob. and Kloss.

Treron bisincta prætermissa, Robinson & Kloss, Journ. Fed. Malay States Mus. x, 1921, p. 203 (Koh Lak).

Osmotreron bicincta, A., p. 411: C. ii, 1883, p. 308; B., p. 159 (Salanga); F., p. 674 (Trang); G., p. 151 (Ratburi & Petchaburi).

Osmotreron bicincta domvillii, Stuart Baker, Indian Pigeons & Doves, 1913, p. 49; I., p. 154 (Koh Lak); L., p. 89 (Ghirbi & Pulau Panjang).

♂. De Lisle Island, W. Coast Siam. 19 February, 1919.

[No. 4121].

♂ ♀. Koh Lak, S. W. Siam. 5 April, 1919. [Nos. 5075, 7075].

"Iris, outer ring pale orange, inner ring blue; bill ivory, greenish at tip; feet pink."

Total length ♂, 292, 285*; ♀, 273*; wing ♂, 158, 161*; ♀, 162*; tail ♂, 103, 105*; ♀, 100*; tarsus ♂, 19, 23*; ♀, 21*; bill from gape ♂, 22, 22*; ♀, 23* mm.

Diagnosis. Larger than *D. b. bisincta* from Madras (wing 144): differs from *D. b. domvillii* Swinh. from Hainan in having the grey nuchal patch in the female clear and more extensive, whereas (*vide* Hartert) it is "indistinct and small" in the island bird.

Hartert has inadvertently (Nov. Zool. xvii, 1910, p. 192) described the Ceylon bird as being smaller, though his specimens are exactly the same size as the typical birds from Madras. Swinhoe states that his *domvillii* is smaller than the typical form (presumably the bird now described), but this is denied by Hartert.

E. and S. E. Siam birds appear to be small; those measured by us have the wing always under 150 mm.

In addition to the above three specimens, we have examined four males and four females from various localities from Junk

* Types.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Seylon to Selangor; wings varying from 157–163 mm. in males and 157–160 in females.

21. *Treron pompadora phayrei* (Blyth).

Osmotreron phayrei, Blyth, Journ. Asiat. Soc. Bengal, xxxi, 1862, p. 344 (Toungchoo); A., pp. 412, 414 (Tavoy, Nwalabo); G., p. 151 (Ratburi and Petchaburi).

Osmotreron pompadora phayrei, Stuart Baker, Indian Pigeons and Doves, 1913, p. 27.

Mr. Gairdner's record is the only one for our portion of Siam. The bird however extends to Cochin-China. On the Tenasserim coast it ranges south as far as Tavoy.

22. *Treron fulvicollis fulvicollis* (Wagl.).

Columba fulvicollis, Wagler, Syst. Av. Columba, sp. 8 (1827, Java).

Osmotreron fulvicollis, A., p. 413 (Pakchan); Stuart Baker, Indian Pigeons and Doves, 1913, p. 46, pl. 2.

This species has not hitherto been obtained in Siam, though it is abundant in the Pakchan estuary from December to March.

It should be noted that the type description is founded on *Columba aromatica* var., Temm. & Knip, fig. 1, p. 30, pl. 6 (1808–11), said to be from Batavia. The species however does not occur in Java, so far as is known, and it will be convenient to regard the *terra typica* as fixed on Sumatra.

The mainland representative, if it is ever recognised as distinct, will be known as *T. f. tenuirostre* (Eyton, 1845, type locality Malacca). The north Bornean, or possibly the montane form in Borneo, is *T. f. baramensis* (Meyer, 1891), from Baram river, N. Sarawak.

The lowland and south Bornean form, if it is distinct, has no name, as *Columba cinnamomea* Temm., 1835, applied to birds from Pontianak, is antedated by *Columba cinnamomea* Swains. (vide Salvadori, Cat. Birds Brit. Mus. xxi, 1893, p. 53).

It should further be observed that Celebes and the Phillipines, quoted in the distribution by certain authors, are not definitely known to be inhabited by this species.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910–11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

23. *Treron olax* (Temm.).

Columba olax, Temm., Pl. Col., 1823, pl. 241 (Sumatra).

Osmotreron olax, Salvad., Cat. Birds Brit. Mus. xxi, 1893, p. 64 (Kossoum).

Treron olax, M. l., p. 30 (Klong Wang Hip, Tung Song).

A pair collected by J. Darling near Ghirbi in June, and now in the British Museum, appear to be the most northerly records for Siam of the Little Green Pigeon.

24. *Ptilinopus jambu* (Gm.).

Columba jambu, Gm., Syst. Nat. ii, 2, 1788, p. 784 (Sumatra).

Rhamphiculus jambu, B., p. 79 ("Malay Peninsula").

In his paper on the birds of Salanga (Puket or Junk Seylon), H. Müller mentions two males and two females from "the Malay Peninsula" without precise locality. As he probably obtained them from the adjacent mainland, and as there is no inherent improbability for the occurrence, we include them here, though hitherto the species has not been recorded from further north than Province Wellesley.

Both sexes differ from all other local pigeons in having a magenta cap: the female is green beneath with a small cinnamon patch on the chin: the adult male is pure ivory white below with a large rose coloured patch on the breast.

"Iris crimson; bill slate, base of culmen dull crimson; feet crimson lake."

25. *Muscadivora aenea aenea* (Linn.).

Columba aenea, Linn., Syst. Nat., i, 1766, p. 283 (Moluccas).

Carpophaga aenea, A., p. 416; C. ii, 1883, p. 301; H., p. 141 (Koh Pennan and Koh Samui); G., p. 151 (Ratburi and Petchaburi).

Carpophaga aenea aenea, Stuart Baker, Indian Pigeons and Doves, 1912, p. 91, pl. 7; I., p. 155 (Hat Sanuk); J., p. 136 (Terutau and Pulau Muntia); L., p. 90 (Pulau Payang, Ghirbi Bay).

♂, ♀. Pulau Mohea (N. Island), W. Coast Siam. 1-2 February, 1919. [Nos. 3913, 3915].

♂. Koh Pipidon, Ghirbi Bay, W. Siam. 4 February, 1919. [No. 3935].

I. Gyldentolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
J. Robinson, Journ. F. M. S. Mus. vii, 1917.
K. Kloss, Ibis, 1918.
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

♀. Koh Yam Yai, W. Siam. 18 February, 1919. [No. 4115].

♀. Koh Yam Noi, W. Siam. 19 February, 1919. [No. 4120].

Total length ♂, 390, 435; ♀, 425, 400, 404; wing ♂, 233, 234; ♀, 244, 223, 238; tail ♂, 146, 170; ♀, 163, 148, 150; tarsus ♂, 39, 36; ♀, 31, 39, 39; bill from gape ♂, 34, 36; ♀, 38, 34, 32 mm.

This small series varies much in the tint of the bronzy green upper surface and in the degree of the vinaceous wash on the head and neck. In size the birds agree with other specimens from the south of the the Malay Peninsula and adjacent islands. The original type locality given by Linnaeus was the Moluccas, where the species is not found.

***Ducula badia badia* (Raffles).**

Columba badia, Raffles, Trans. Linn. Soc. xiii, 1822, p. 317 (Sumatra).

Carpophaga sp., A., p. 417 (Mergui); Anderson, Journ. Linn. Soc. Zool., xxi, 1187, p. 151 (Sullivan Id., Mergui Archipelago).

There is no definite record of this species in Peninsular or S. W. Siam, though it is extremely common in the mountains throughout the Federated Malay States, coming down to the coast at certain seasons. It is almost certain to be found in the mountains of Trang or in the high mountains separating Patani from Perak. As Hume observes, the fruit pigeons seen by Davison in immense numbers at Mergui in August were probably this form.

26. *Ducula badia griseicapilla* Wald.

Ducula griseicapilla, Wald., Ann. and Mag. Nat. Hist (4) xvi, 1875, p. 228 (Karin Hills); G., p. 515 (Ratburi and Petchaburi).

Ducula insignis griseicapilla, Stuart Baker, Indian Pigeons and Doves, 1913, p. 104, pl. 8.

The only record for our area is that of Gairdner from Ratburi or Petchaburi. All the forms of the subgenus currently accepted as *Ducula*, with the possible exception of the Javan *D. lacernulata* and allied races from Bali and Lombok, obviously stand in subspecific relation to each other. The plate given by S. Baker, *loc. cit.*, is brighter on the shoulders than our specimens of *D. b. griseicapilla* from

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Annam, and in this respect approaches *D. b. badia*. The present subspecies may be separated from *D. b. badia* by its rather larger size, less rich and purplish colour above and paler buff under tail-coverts.

27. *Columba livia intermedia* Strickl.

Columba intermedia, Strickl., Ann. and Mag. Nat. Hist. xiii, 1844, p. 39 (India); Salvad., Cat. Birds Brit. Mus., xxi, 1893, p. 261, spm. m3 (Salanga); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 30 (Tachin and Bangkok).

It is doubtful if any rock-pigeons from central and south Siam can be regarded as truly wild: we record it for this area merely on the strength of a skin from Salanga (Puket), now in the British Museum.

28. *Alsocomus puniceus* (Tick.).

C. (Alsocomus) puniceus, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 461 (Singbhum, Chota Nagpur).

Alsocomus puniceus, A., p. 418; C. ii, 1883, p. 289; Stuart Baker, Indian Pigeons and Doves (1913), p. 176, pl. 18, I., p. 151 (nr. Koh Lak); G., p. 151 (Ratburi and Petchaburi); Kp.; 83 (Koh Lak).

Columba punicea, F., p. 674 (Pulau Terutau); J., p. 136 (Pulau Muntia); L., p. 90 (Junk Seylon).

"Iris, inner ring yellow, outer orange; bill, plum coloured at base, whitish horn at tip; feet pinkish maroon."

This fine pigeon is fairly common in the winter months on the islands off the west coast of Siam, though whether it is a resident or a seasonal visitor is unknown, as collecting is inconvenient or impossible in these localities during the summer. On the east coast it is apparently much rarer. Our series shows that the sexes are practically alike, females with the grey cap similar to adult males, but with the undersurface with slightly less gloss and more brick-red, less purplish in tint.

On Koh Muk, in January 1917, they were roosting in mangroves behind a sandy beach, apparently feeding on the mainland, distant about three miles, during the day.

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

29. *Myristicivora bicolor bicolor* (Scop.).

Columba bicolor, Scop., Del. Flor. et Faun. Insubr. ii, p. 94 (1786).
Myristicivora bicolor, Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 61 (Chumpon Bay).

Though the species must certainly occur at times on the Siamese side of the international boundary through the Langkawi group, specimens have not actually been obtained from that locality. The only record therefore from our area is the above specimen from Chumpon. The species also occurs on the Koh-Si-Chang group in the Inner Gulf of Siam. It is likewise found in Cochin-China.

Macropygia leptogrammica, subsp. ?

Columba leptogrammica, Temm., Pl. Col., 1835, pl. 560 (Java and Sumatra).
Cecyzura tusalia, Hodgs. in Blyth, Journ. Asiat. Soc. Bengal, xii, 1843, p. 937, note (D.rjiling).
Macropygia tusalia, Stuart Baker, Indian Pigeons and Doves, 1913, p. 238, pl. 24.

The forms of the large Cuckoo Dove inhabiting Java, Sumatra and the southern Malay Peninsula, Hainan and the Indo-Chinese countries stand in very close subspecific relation and will, as the oldest name, have all to be called *M. leptogrammica*.

Though it is very likely that a bird of this species will be found inhabiting the higher hills, no specimen has been actually obtained, though there is a note by Gairdner of a bird, "probably *tusalia*", having been seen somewhere in Ratburi or Petchaburi.

Macropygia ruficeps, subsp.

Columba ruficeps, Temm., Pl. Col., 1835, pl. 561 (Java).
Macropygia assimilis, Hume, Stray Feath. ii, 1874, p. 441 (Hills of Tenasserim).

Of this Cuckoo Dove, also, with the exception of one specimen from the extreme north of Siam, which is not germane to the present paper, there are no specimens whatever on record from Siam. The species, however, is certain to occur in suitable localities throughout the country.

Those from Patani, etc., will be almost certain to agree with

A. Hume, & Davison, Stray Feathers, vi, 1878.
 B. Müller, Die Ornithologie der Insel Salanga, 1882.
 C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
 D. Bonhote, P. Z. S. 1901, Vol. i

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
 F. Robinson and Kloss, Ibis, 1910-11.
 G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
 H. Robinson, Journ. F. M. S. Museums, v, 1915.

the form found in Perak, Province Wellesley and further south; while those from Peninsular Siam to the north will probably agree with *M. assimilis*, which is always a browner and less rufous bird.

The species is a skulker, found in thick undergrowth, and is extraordinarily fond of the small chillies grown by Malays. In the Federated Malay States it is nearly always abundant in the vicinity of hot springs.

30. *Oenopopelia tranquebarica humilis* (Temm.).

Columba humilis, Temm., Pl. Col., 1834, pl. 259 (Bengal and Luzon).

Turtur humilis, Walden, Trans. Zool. Soc. ix, 1875, p. 219 (type locality selected, Luzon); A., p. 423 (Pakchan); C. ii, 1883, p. 294 (Malay Peninsula).

Oenopopelia tranquebarica humilis, Stuart Baker, Indian Pigeons and Doves, 1913, p. 234, pl. 23; I., p. 150 (Koh Lak); K., p. 84 (Koh Lak).

Oenopopelia tranquebarica, G., p. 151 (Ratburi and Petchaburi).

Pakchan is the southernmost authenticated locality for this species: no credence need be placed on the locality "Malacca", attached to certain specimens.

Females differ considerably from males in being much less vinous.

31. *Streptopelia chinensis tigrina* (Temm. & Knip.).

Columba tigrina, Temm. Fig. i, 1808-11, pl. 43 (Batavia).

Turtur tigrina, A., p. 442; C. ii, 1883, p. 290; B., p. 79 (Junk Seylon); D., p. 77 (Patani); E., p. 121 (Patani); F., p. 675 (Trang); H., p. 88, 141 (Bandon and Koh Pennan); G., p. 151 (Ratburi and Petchaburi).

Turtur tigrinus minor, Parrot, Abhandl. der K. Bayer. Akad. der Wissench. Munchen, ii, kl. xxiv, 1907, Bd. 1, p. 275 (Sumatra).

Streptopelia suratensis tigrina, Stuart Baker, Indian Pigeons and Doves, 1913, p. 210, pl. 21; J., p. 136 (Pulau Lontar); K., p. 83 (Koh Lak); L., p. 90 (Junk Seylon, etc.); M. I., p. 32 (Tung Song).

2 ♂. Tapli, Pakchan Estuary, Peninsular Siam. 11 March, 1919. [Nos. 4535, 6].

♂, ♀. Koh Lak, S. W. Siam. 4-7 April, 1919. [Nos. 5015, 5147].

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- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
 J. Robinson, Journ. F. M. S. Mus. vii, 1917. Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
 K. Kloss, Ibis, 1918. M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

"Iris orange; bill greyish black; feet maroon".

Total length ♂, 306, 318, 317; ♀, 305; wing ♂, 140, 141, 145; ♀, 146; tail ♂, 148, 152, 147; ♀, 150 (worn); tarsus ♂, 26, 25, 25; ♀, 25; bill from gape ♂, 22.5, 20; ♀, 22 mm.

Extraordinarily common over the whole area in family parties or small flocks, keeping to open country.

The very large series that we have examined does not bear out Parrot's contention that the mainland birds are smaller than those from Java, though topotypes of his race from Deli are under 140 mm. in the wing.

32. *Geopelia striata striata* (Linn.).

Columba striata, Linn., Syst. Nat. i, 1766, p. 282 (East Indies).

Geopelia striata, A., p. 423; C. ii, 1883, p. 298; B., p. 79 (Junk Seylon); E., p. 121 (Patani); Stuart Baker, Indian Pigeons and Doves, 1913, p. 253, pl. 26; H., p. 137 (Pulau Lontar); L., p. 90 (Ghirbi); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 72. *Geopelia striata striata*, M.l, p. 32 (Tung Song).

2 ♂. Tapli, Pakchan Estuary, Peninsular Siam. 11 March, 1919. [Nos. 4533-8].

"Iris whitish, orbits silvery verditer; cere silvery blue; bill pale horn; feet dark maroon".

Total length 230, 228; wing 98, 94; tail 108, 105; tarsus 21, 20; bill from gape 16, 17 mm.

Very common in open spaces with the preceding, possibly becoming scarcer further north.

33. *Chalcophaps indica indica* (Linn.).

Columba indica, Linn., Syst. Nat. i, 1766, p. 284 (East Indies).

Chalcophaps indica, A., p. 424; C. ii, 1883, p. 297; D., p. 77 (Patani); E., p. 122 (Patani); F., p. 675 (Trang); H., p. 88 (Bandon); *id. op. cit.* vii, 1917, p. 137 (Terutau); G., p. 151 (Ratburi and Petchaburi); Stuart Baker, Indian Pigeons and Doves, 1913, p. 121 pl. 11; L., p. 90 (Ghirbi, Puket Islands).

Chalcophaps indica indica, M.l, p. 32 (Tung Song and Patiyyu).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fascioli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♀. Tapli, Pakchan Estuary, Peninsular Siam. 2 March, 1919.
[No. 4375].

♂, ♀. Tasan, Chumpon, Peninsular Siam. 13 March, 1919.
[Nos. 4559-60].

♂. Hat Sanuk, nr. Koh Lak, S. W. Siam. 15 April, 1919.
[No. 5323].

"Iris dark, eyelid crimson, orbits purplish slate; bill coral, cere maroon; feet dark maroon".

Total length ♂, 249, 245; ♀, 251, 238; wing ♂, 142, 142; ♀, 145, 137; tail ♂, 100, 88; ♀, 87, 95; tarsus ♂, 25, 24; ♀, 22, 22; bill from gape ♂, 22, 22; ♀, 20. 5, 27 mm.

Common throughout the area, wherever there are suitable evergreen forests.

34. *Caloenas nicobarica nicobarica* (Linn.).

Columba nicobarica, Linn., Syst. Nat. i, 1766, p. 283 (Nicobar Islands).

Caloenas nicobarica, A., p. 425 (Mergui Archipelago); F., p. 675 (Terutau).

♂, ♀, ad. Pulau Mohea (South Island), W. Coast Siam. 2-3 March, 1919. [Nos. 3920-1].

♂, imm. Koh Pipidon, Ghirbi Bay, W. Coast Siam. 4 March, 1919. [No. 3940].

"Iris hazel; bill and cere black, orbits dull pale olive; feet livid plum, claws gamboge". Immature birds with the iris grey and feet duller.

Total length ♂, 380, 348; ♀, 380; wing ♂, 247, 237; ♀, 257; tail ♂, 106, 100; ♀, 106; tarsus ♂, 42, 46; ♀, 45; bill from gape ♂, 35, 33; ♀, 35 mm.

Fully adult males and females are alike: immature birds differ in having the hackles shorter and the tail black, glossed with green, not pure white. At certain seasons this bird appears to be common on the islands off the west coast of Siam; on the east coast it is

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part)

known from the smaller islands of the Pahang and Johore Archipelago and the Redang group off Trengganu; but it has not been found on the islands off the east coast of Peninsular and S. W. Siam, though it occurs on Pulo Condore, off Cochin-China. Nowhere is it ever met with on the mainland. The habits in the main are those of the jungle game-birds; it is a runner and does not readily take to the trees unless persistently disturbed, though it roosts in them at night.

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| A. Hume & Davison, <i>Stray Feathers</i> , vi, 1878. | E. O. Grant, <i>Fasciculi Malayenses</i> , iii (Birds), 1905. |
| B. Müller, <i>Die Ornithologie der Insel Salanga</i> , 1882. | F. Robinson and Kloss, <i>Ibis</i> , 1910-11. |
| C. Oates, <i>Birds Brit. Burmah</i> , Vols. i & ii, 1883. | G. Gairdner, <i>Journ. N. H. Soc. Siam</i> , i, 1915. |
| D. Bonhote, <i>P. Z. S.</i> 1901, Vol. i. | H. Robinson, <i>Journ. F. M. S. Museums</i> , v, 1915. |

RALLIFORMES.

RAILS AND GALLINULES.

1	{ Tail-feathers eighteen	<i>Heliopais personata</i> .	2
	{ Tail-feathers ten or twelve .. .. .	.. .. .
2	{ With a horny frontal shield .. .. .	.. .. .	3
	{ With no horny frontal shield .. .. .	.. .. .	5
3	{ General plumage blue	<i>Porphyrio calvus edwardsi</i> .	
	{ General plumage not blue .. .. .	.. .. .	4
4	{ Toes with a narrow membranous fringe, not lobed	<i>Gallinula chloropus parvifrons</i> .	
	{ Toes without a membranous fringe	<i>Gallinula cinerea</i> .	
5	{ Plumage uniform above .. .. .	.. .. .	6
	{ Plumage streaked above .. .. .	.. .. .	10
6	{ Culmen expanded at base; plumage white and slate	<i>Amaurornis phoenicurus chinensis</i> .	
	{ Culmen not expanded at base; plumage brown and rufous .. .. .	.. .. .	7
7	{ Tarsus about equal to middle toe and claw .. .. .	.. .. .	8
	{ Tarsus shorter than middle toe and claw .. .. .	.. .. .	9
8	{ Wing coverts barred; legs red	<i>Rallina fasciata</i> .	
	{ Wing coverts uniform; legs black	<i>Rallina supercilialis</i> .	
9	{ Larger; plumage partially barred below	<i>Limnobaenus paykulli</i> .	
	{ Smaller; plumage uniform below	<i>Limnobaenus fuscus erythrothorax</i> .	
10	{ Culmen about equal to middle toe and claw	<i>Hypotaenidia striata</i> .	
	{ Culmen much shorter than middle toe and claw	<i>Porzana pusilla</i> .	

35. *Heliopais personata* (G. R. Gr.).

Podica personata, G. R. Gray, P. Z. S., 1848, p. 90, Aves, pl. 4 (Malacca); A., p. 465, (Banharon).

Heliopais personata, D., p. 79 (Patani); H., p. 141 (Koh Pennan, Bandon); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 32 (Chantabun).

♂, Koh Pennan, Bandon Bight. 27 May, 1913.

Wing, 245 mm. (dry).

"Iris dark hazel; feet apple green with tinge of blue; edges of lobes and soles yellowish; lobes black beneath; bill chrome yellow, yellowish green on culmen; basal culminal process chrome yellow."

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

The Masked Finfoot is everywhere an extremely rare bird: it is usually found on fairly rapid rivers or small streams, feeding under the banks and, when alarmed, moving through the water with the aid of its wings, rarely taking properly to flight.

The eggs of the Masked Finfoot, hitherto unknown, have recently been discovered on the Myitnaka river, Southern Burma, and have been described by Mr. E. C. Stuart Baker in "Bull. Brit. Orn. Club," xli, 1921, p. 57. A fuller account of the nidification is given by Mr. Cyril Hopwood, "Journ. Nat. Hist. Soc. Bombay," xxvii, 1921, pp. 634-636.

36. *Hypotaenidia striata* (Linn.).

Rallus striatus, Linn., Syst. Nat. i, 1766, p. 292 (Philippines).

Rallus albiventer, Swains. Anim. Menag. 1837, p. 337 (India).

Hypotaenidia striata, A., p. 468 (Tavoy); B., p. 85. (Malay Peninsula).

Hypotaenidia striata gularis, M.l, p. 36 (near Bangkok).

The only record for this common Rail from the area is that of Müller, from the "Malay Peninsula"—presumably adjacent to the island of Puket. Our series from the Federated Malay States is also singularly deficient, and as we have no specimens from Java we are unable to state to which of the named races the Siamese bird should be assigned. Baker calls it *gularis* (Horsf.), whereas Oberholser (Proc. U. S. Nat. Mus. 55, 1919, p. 478) confines that race to Java, and considers that birds ranging from India to the Malay Peninsula and Cochin-China should stand as *H. s. albiventris* Swainson.

Eight birds in Mr. Williamson's collection, all from the vicinity of Bangkok, agree well with three from Sumatra, but are paler both above and below than two from S. W. Borneo which are almost certainly identical with the Javan bird.

37. *Rallina superciliaris* (Eyton).

Rallus superciliaris, Eyton, Ann. and Mag. Nat. Hist. xvi, 1845, p. 230 (Malacca).

Rallina fasciata, Rob. and Kloss (*nec* Raffles); L., p. 91 (Pulau Sireh, Junk Seylon).

♂. Tasan, Chumpon, Peninsular Siam. 28 March, 1919. [No. 4923].

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Our specimen from Pulau Sireh, near Puket, which is quite immature, was unfortunately wrongly identified; it belongs to this species.

Little is known of the true breeding range: most of the specimens in our possession have been obtained either at sea or on small islands or on the tops of high mountains, evidently on passage. It can at once be distinguished from *R. fasciata* by its greenish black, not crimson, legs, and by the much smaller bill.

38. *Rallina fasciata* (Raffles).

Rallus fasciatus, Raffles, Trans. Linn. Soc. xiii, 1822, p. 328 (Sumatra).

Rallina fasciata, C. ii, p. 341 (Tavoy); D., p. 78 (Patani); H., p. 137 (Terutau).

Both this species and the following are highly migratory birds, though whether merely within local limits, or from breeding to winter quarters, is not known with certainty.

At the end of October, 1909, after a period of heavy wind and rain, this bird appeared in very large numbers near Alor Star, Kedah, and was trapped in quantity by the local Malays.

Limnobaenus paykulli (Ljung).

Rallus paykulli, Ljung, Sv. Vet. Akad. Handl., 1813, p. 258, Taf. v, (Batavia).

Rallina mandarina, Swinh., Ann. & Mag. Nat. Hist. (4) v, 1870, p. 173 (Canton).

This species is sparsely distributed during winter in Java, Borneo and the Malay Peninsula, and appears to be a breeding bird in E. Siberia and China. It is easily confused with immature specimens of *Rallina supercilialis* from which it differs in being of a darker colour above, and in having the middle toe and claw distinctly longer than the tarsus.

The bill is shorter, and in the specimens before us the barring on the under surface is not continuous across the centre of the belly.

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

39. *Limnobaenus fuscus erythrothorax* (Temm. & Schleg.).

Gallinula erythrothorax, Temm. & Schleg., Faun. Japan., Aves, 1850, p. 121, pl. xxviii (Japan).

Amaurornis fuscus, F., p. 120 (Patani).

Limnobaenus fuscus, H., p. 141 (Koh Samui, Bandon).

1 ♂. West side, Koh Samui, Bandon Bight. 6 May, 1913.

Wing (dry) 103 mm.

"Iris and orbits red; bill bluish green; legs pale coral; claws black."

The typical form of this species was described from the Philippines: and birds from Java, Sumatra and the south of the Malay Peninsula, named *Rallus rubiginosus*, Temm. Pl. Col. pl. 357 (1825), are identical with it, all having the wing 98 mm. or under.

Chinese and Japanese birds, *L. f. erythrothorax*, are said to have the wing over 105 mm., while Indian (Nepal, etc.) birds, figured and named by Hodgson as *Zapornia flammiceps*, but apparently never described, are stated by Sharpe (Cat. Birds Brit. Mus. xxiii, 1894, p. 147) to be intermediate. Southern Indian birds are as small as Malayan, but have not been named.

Mr. Hartert has named the N. Indian bird *Porzana f. bakeri* (Nov. Zool. xxiv, 1917, p. 272), type from Kumaon.

We have examined twelve specimens in Mr. Williamson's collection (eleven from near Bangkok and one from Meklong), shot in the months January to May. They differ from Sumatran and Malayan birds in having the wing from 103–112 mm., against a maximum of 98, and in being paler in tint both above and below. The extent of the red on the crown is a variable quantity. We regard them all as belonging to this race and not to *P. f. bakeri*.

40. *Porzana pusilla pusilla* (Pall.).

Rallus pusillus, Pall., Reise Prov. Russ. Reichs. iii, p. 700 (1776—Dauria).

Porzana auricularis, Rehnw., Journ. für Orn. 1898, p. 139 (new name).

Porzana bailloni, A., p. 467 (Tavoy).

Porzana pusilla, D., p. 79 (Patelung); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 32 (Bangkok).

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salangka, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Rare or extremely difficult to procure in our area: probably not uncommon in the great reed beds and swamps at the north end of the Talé Sap and Talé Noi.

41. *Amaurornis phoenicura chinensis* (Bodd.).

Fulica chinensis, Boddaert, Tabl. Pl. Enl., 1783, p. 54 (Hong-kong).

Gallinula phoenicura, A., p. 466 (Banharoon)

Erythra phoenicura, B., p. 86 (Junk Seylon); C. ii, p. 348.

Amaurornis phoenicura, E., p. 120 (Jalor); F., p. 11 (Trang); G., p. 132 (Ratburi and Petchaburi).

Amaurornis phoenicura chinensis, Stresemann, Nov. Zool. xx, 1913, p. 304 (Hong Kong); H., p. 141 (Koh Pennan); I., p. 148 (Hat Sanuk); L., p. 91 (Pulau Panjang, Ghrbi Bay); M. I, p. 37 (Patiyu).

2 ♂. Tasan, Chumpon, Peninsular Siam. 19—26 March, 1919.
[Nos. 4814, 4807].

♀. Hat Sanuk, nr. Koh Lak, S. W. Siam. 17 April, 1919
[No. 5369].

"Iris red; bill sea-green, reddish above and on cere; feet yellowish brown."

Total length ♂, 323; 335; ♀, 305; wing ♂, 176, 168; ♀, 168; tail ♂, 78, 77; ♀, 70; tarsus ♂, 51, 54; ♀, 52; bill from gape ♂, 40, 40; ♀, 37.

Universally distributed over the area in suitable localities. These birds are rather large, Malayan specimens being slightly smaller than typical Chinese birds.

***Gallinula chloropus parvifrons* Blyth.**

Gallinula parvifrons, Blyth, Journ. Asiat. Soc. Bengal, xi, 1843, p. 180 (nr. Calcutta).

Gallinula chloropus, A., p. 466 (Tavoy Estuary).

Gallinula chloropus parvifrons, Claude Grant, Ibis, 1915, p. 47; Hartert, Nov. Zool. xxiv, 1917, p. 268.

We have examined nine specimens from various parts of Siam, south to Bangkok. All belong to this form, which is distinguished from the European Moorhen by its small size and by having the frontal shield almost parallel-sided, not expanded posteriorly.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part)

From *Gallinula chloropus orientalis*, Horsf., Trans. Linn. Soc. xiii, 1821, p. 195 (Java), inhabiting Java, Sumatra, Borneo, and found as a breeding bird in the southern half of the Malay Peninsula, it is distinguished by the smaller frontal shield and by the brown mantle and wing coverts, which are pure grey in the Malayan bird.

There are no actual records of any kind from S. W. or Peninsular Siam, but the race is certain to be found there. *Gallinula chloropus orientalis* will probably also be found in the Patani Province.

42. *Gallicrex cinerea* (Gm.).

Fulica cinerea, Gm., Syst. Nat. i, 1788 p. 702, (China).

Gallicrex cinerea, A., p. 466 (Tavoy); D., p. 79 (Patelung); E., p. 120 (Patani town); G., p. 152 (Ratburi and Petchaburi).

The Water Cock is probably common in swampy situations and at the edges of ricefields throughout the country.

43. *Porphyrio calvus edwardsi* Elliot.

Porphyrio edwardsi, Elliot, Ann. & Mag. Nat. Hist. (5) i, 1878, p. 98 (Cochin China); id., Stray Feathers, vii, 1878, p. 23, pl.; Hume, Stray Feath. ix, 1880, p. 121 (Klang, Selangor).

? *Porphyrio poliocephalus*, G., p. 151 (Ratburi and Petchaburi).

Gairdner's record is the only one for the genus in the vicinity of the area now being dealt with. It is just possible that his identification is correct, and that the bird he obtained was really *P. poliocephalus*, which differs from the present form in having the mantle bluish green, not blackish, with, at most, an oily green wash. The distinctness of the present subspecies from the typical Javan form, *P. calvus*, is open to strong doubt; it only differs in having the head ashy grey in the majority of birds, while in the majority of Javan and Sumatran specimens the head is dark: this, however, as Sharpe points out (Cat. Birds Brit. Mus. xxiii, 1894, p. 201) may be largely due to the effects of wear.

We have examined two birds from the vicinity of Chiengmai in Mr. Williamson's collection, which are certainly *P. poliocephalus*, another from Chainat, C. Siam, which is probably *edwardsi* though there is a wash of greenish on the secondaries and mantles. Another

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. I & II, 1883.

D. Bonhote, P. Z. S. 1901, Vol. .

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

specimen from the same locality is certainly *edwardsi*. A male in freshly moulted plumage from Klong Samrong, nr. Bangkok, shot in November, has the mantle, inner secondaries and tail glossy black, with practically no trace of oily green wash. It may be taken as typical *P. e. edwardsi*. There are, however, too many nominal "species" in the genus.

In the Malay Peninsula the bird is rare and local: it is, however, almost certain to be found in Trang and in the vicinity of the Talé Noi and Talé Sap in Patelung and Singora.

The bird of Malacca has been described and named *Porphyrio viridis* by Begbie—a matter hitherto overlooked ("The Malayan Peninsula," 1834, p. 515). We cannot say, for lack of sufficient material, whether the name must be accepted.

PODICIPEDIDAE.

GREBES.

44. *Podiceps fluviatilis philippensis* (Bonn.).

Colymbus philippensis, Bonnat, Tabl. Encycl. Méth. i, (1790), p. 58, pl. 46, fig. 3.

Podiceps philippensis, D., p. 80 (Patelung).

Podiceps albipennis, Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 42 (Central and S. E. Siam).

3 ♂, 4 ♀ *hyem.* Koh Lak, S. W. Siam, 7 April, 1919. (Nos. 5124-8, 5143, 5145).

"Iris lemon; lower mandible cream, upper mandible black, tomtia pale yellow, culmen black, base of bill pale green; feet dark sage green."

Total length ♂, 238, 275, 240; ♀, 233, 238, 243, 252; wing ♂, 107, 101, 109; ♀, 103, 102, 103, 103; tarsus ♂, 34, 32, 34; ♀, 35, 32, 32, 33; bill from gape ♂, 26.5, 30, 30; ♀, 26.5, 28.5, 26, 28 mm.

These birds, which are all in non-breeding plumage, are not typical *P. f. philippensis*; two specimens (Nos. 5125-5126) show an approach to *P. capensis* (of which *P. albipennis* is a synonym)

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

in the greater extent of white on the inner primaries and secondaries. The same is the case in a female in breeding plumage in Mr. Williamson's collection from Chantabun. Grant (Cat. Birds Brit. Mus. xxvi (1898), pp. 512-514) has noted the same tendency in birds from Burma and Luzon.

Our men found this Grebe very common on a shallow pond on the edge of a swamp near the coast, together with two species of Parridae.

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| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905. |
| B. Müller, Die Ornis der Insel Salanga, 1882. | F. Robinson and Kloss, Ibis, 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

LARIDAE

GULLS AND TERNS.

1	{ Bill much compressed, knife-like	<i>Rhynchops</i> (extra limital).	2
	{ Bill normal .. .. .	.. .. .
2	{ Upper mandible longer than the lower	<i>Larus bruneicephalus</i> .	3
	{ Mandibles of equal length .. .. .	.. .. .
3	{ Plumage dark above and below : outermost tail feather not the longest	<i>Anous stolidus</i> .	4
	{ Plumage not dark below : outermost tail feather the longest .. .. .	.. .. .
4	{ Tarsus long, exceeding middle toe and claw	<i>Gelochelidon anglica</i> .	5
	{ Tarsus short, less than middle toe and claw .. .. .	.. .. .
5	{ Bill very stout, tail less than 1/3 the wing	<i>Hydroprogne caspia</i> .	6
	{ Bill normal, tail 1/2 the wing or more .. .. .	.. .. .
6	{ Tail almost square, the feathers rounded .. .. .	.. .. .	7
	{ Tail forked, the feathers pointed .. .. .	.. .. .	8
7	{ Larger, bill blood-red in breeding plumage : tail grey in non-breeding plumage	<i>Hydrochelidon hybrida</i> .	
	{ Smaller, bill dull red in breeding plumage : tail white in non-breeding plumage	<i>H. leucoptera</i> .	
8	{ Tail long, exceeding 3/4 the wing	<i>Seena seena</i> .	9
	{ Tail shorter, less than 2/3 the wing .. .. .	.. .. .
9	{ Mantle and back sooty brown	<i>Sterna anaetheta</i> .	10
	{ Mantle and back grey .. .. .	.. .. .
10	{ Large, wing over 11.5 inches .. .. .	.. .. .	12
	{ Medium, wing not more than 11 inches .. .. .	.. .. .	15
	{ Small, wing less than 8 inches .. .. .	.. .. .	11
11	{ Larger, bill greenish	<i>S. bergii pelecanoides</i> .	
	{ Smaller, bill orange or yellow	<i>S. media</i> .	
12	{ Whole crown always white	<i>S. sumatrana</i> .	13
	{ Crown black or partially black .. .. .	.. .. .
13	{ Feet blackish	<i>S. longipennis</i> .	14
	{ Feet reddish .. .. .	.. .. .
14	{ Inner webs of primaries edged with white to the tips : bill red : feet brighter	<i>S. dougalli</i> .	
	{ Inner webs of primaries not edged with white to the tips : bill black : feet duller	<i>S. fluviatilis tibetana</i> .	
15	{ Shafts of all primaries white	<i>S. sinensis</i> .	
	{ Shafts of two outer primaries brown	<i>S. minuta</i> .	
	{ Shafts of three outer primaries brown	<i>S. saundersi</i> .	

NOTE. In this Order we have not, as a rule, attempted to attach rigorously correct subspecific names to the various forms. This is almost impossible without comparative material from all parts of the Oriental and Australasian regions, which is not in our possession.

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
 J. Robinson, Journ. F. M. S. Mus. vii, 1917. Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
 K. Kloss, Ibis, 1918. M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

45. *Larus brunneicephalus* Jerd.

Larus brunneicephalus, Jerdon, Madras Journ. L. S. xii, 1840, p. 25 (Madras); A, p. 491 (south to Tongka); I., p. 148 (Inner Gulf of Siam); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 36 (Inner Gulf of Siam).

On the western side of Peninsular Siam only doubtfully recorded as a rare straggler as far south as Junk Seylon in winter. Apparently common in winter on the eastern side in the Inner Gulf of Siam and as far south as Koh Lak. Quite unknown from Malayan waters.

46. *Hydrochelidon hybrida* (Pall.).

Sterna hybrida, Pall., Zoogr. Rosso-Asiat. ii, p. 338 (1811, Volga).
Hydrochelidon hybrida, Williamson, Journ. Nat. Hist. Soc. Siam, i, 1914, p. 48 (Bangkok); I., p. 147 (1916); Williamson, op. cit. iii, 1918, p. 37 (Bangkok).

The occurrence of the Whiskered Tern in the area rests for the present on Gyldenstolpe's bird from Koh Lak, shot in December, and therefore probably in winter plumage. This bird had a wing of 220 mm., which, though large for *H. leucoptera*, is small for *H. hybrida*, so that the identification yet remains to be fully confirmed. The species is, however, abundant in the vicinity of Bangkok, and in east and central Siam, whence we have examined many specimens, both in breeding and winter plumage, in the collection of Mr. W. J. F. Williamson.

47. *Hydrochelidon leucoptera* (Meisn. & Schinz).

Sterna leucoptera, Meisner & Schinz; Vög. Schweiz, 1815, p. 264 (Lake Geneva).

Hydrochelidon leucoptera, Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 37 (nr. Bangkok).

All specimens of this genus that we possess from the Straits of Malacca, north to Penang and the Siamese boundary, are this species which, in immature and winter plumage, can only be distinguished from the preceding by its smaller size, white tail and tail-coverts, and markedly shorter bill. We have seen two specimens from Bangkok in young and winter plumage, shot in April and

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|---|---|
| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905 |
| B. Müller, Die Ornith. der Insel Salanga, 1882. | F. Robinson and Kloss, This, 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

October, which we believe to be this form, but pending the receipt of adult birds in breeding plumage the identification is doubtful. Immature and winter plumage specimens of *H. hybrida* appear to have the crown more streaked than in this species.

48. *Hydroprogne caspia* (Pall.).

Sterna caspia, Pall., Nov. Comm. Petrop. xiv, i, p. 582, tab. xxii, fig. 2 (1770).

Hydroprogne caspia, Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 37 (Tachin, Inner Gulf of Siam).

The birds obtained by Williamson at Tachin are the only records for this species from Siam. The bird is the largest of all the terns, with a wing exceeding 400 mm. (16 inches), and with an exceptionally heavy bill.

49. *Gelochelidon anglica* (Mont.).

Sterna anglica, Mont., Orn. Dict. Suppl. 1813, fig. (Sussex); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 62 (Inner Gulf of Siam).

Gelochelidon anglica, A., p. 491 (Mergui); H. Saunders, Cat. Birds Brit. Mus. xxv, 1896, p. 31., spm. s' (Pakchan).

Very common in the Straits of Malacca in the winter months: we have not ourselves met with it in Siamese waters.

50. *Seena seena* (Sykes).

Sterna seena, Sykes, P. Z. S. 1832, p. 171 (Deccan); I., p. 148 (Koh Lak).

Gyldenstolpe's record of this river tern from Koh Lak is the most southerly one. The species is not found in the Straits of Malacca, and Kelham's records (Ibis, 1882, p. 201) are referable to *Sterna media* Horsf. We have examined his specimens, which are preserved in the Raffles Museum, Singapore.

51. *Sterna bergii pelecانoides* (King).

Sterna cristata, Steph. in Shaw's Gen. Zool. xiii, Pt. 1, 1825, p. 146 (China).

Sterna pelecانoides, King, Surv. Inter trop. and West Coast Australia, Vol. 2, 1827, p. 422 (Torres Straits).

Sterna bergii, A., p. 493 (Bokpyin); C. ii, p. 428; E., p. 11 (Terutau); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 83 (Koh Rin and Koh Chuan, Inner Gulf of Siam).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Thalasseus bergii pelecanoides, J., p. 143 (Terutau).

The Malayan material in our possession, though larger than that in the hands of Mr. Oberholser, is not sufficient to enable us satisfactorily to discriminate the local races of these sea-terns, our area being apparently the meeting places of three nominal forms, viz, *S. b. cristatus*, *S. b. edwardsi* and *S. b. pelecanoides*, but the balance of probability is that the birds on the eastern side of the Peninsula will prove to be *S. b. cristatus*, while, according to Oberholser, those from the west should be *S. b. edwardsi*. We are unable to separate Terutau and Langkawi birds from Tioman and Rhio Island specimens which, *vide* Oberholser, should be *S. b. pelecanoides* King.

We have examined nine fully adult birds in fresh breeding plumage from various islands in the Inner Gulf of Siam. Eight males have the wing 334–360 mm. and a female 335, the median being 347 mm. On the whole, therefore, we refer all Malayo-Siamese birds to the Australian *S. b. pelecanoides*.

Sterna media Horsf.

Sterna media, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 198 (Java); Howard Saunders, Cat. Birds Brit. Mus. xxv, 1896, p. 86.

This large tern, which is easily recognised by its somewhat slender, yellow-orange bill, is sparingly distributed in the Straits of Malacca. We have obtained it north of Penang, and there is little doubt that it will be found on the coast of west Siam: though it is only doubtfully recorded from the Tenasserim coast. It will not, in all probability, be found on the eastern side.

52. *Sterna fluviatilis tibetana* Saunders.

Sterna tibetana, Saunders, P. Z. S. 1876, p. 649 (Thibet); Hume,

Stray Feath. viii, 1879, p. 158 (Tongka).

Sterna longipennis, Saunders, Cat. Birds Brit. Mus. xxv, 1896, p. 60, spms. u., v.

Sterna fluviatilis tibetana, J., p. 142 (Terutau).

Terns of this group are common in the Straits of Malacca, and have been referred indifferently to the common European tern

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

and to *S. longipennis* Nordm., a somewhat closely related species breeding in North China, Kamschatka, etc., and wintering in the south. All the birds found in these waters are, however, either immature or in winter plumage, and it is impossible to identify them with any great certainty.

The balance of probability is in favour of their belonging to the Asiatic race, which breeds in Tibet, etc., and winters in the south. The bird has not been found on the East Coast of Siam.

53. *Sterna dougalli* Mont.

Sterna dougalli, Mont., Orn. Diet. Suppl. 1813. fig. (no pagination—Scotland); A., p. 492 (Laynah Creek); H., p. 142 (Koh Pennan); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 63 (Koh Rin and Koh Phai, Inner Gulf of Siam).

The Roseate Tern has been much divided and many names are available for eastern and southern races, but we do not here attempt precisely to assign the Siamese specimens to any subspecies.

Two birds obtained by ourselves on Koh Pennan on 26th May, 1913, in freshly moulted full breeding plumage, have the tarsi and toes orange-red, the claws blackish, and the bills entirely black with no trace of red whatever. Wing ♂, 228: ♂, 213 mm.

On the other hand, three males from Pulau Jemor, Aroa Ids., Straits of Malacca, shot on 2nd. August, 1906, also in full breeding plumage, have the tarsi, toes and claws orange-red, and the bills also orange-red with no trace whatever of black. Wing ♂, 214, 217, 230 mm.

54. *Sterna sumatrana sumatrana* Raffles.

Sterna sumatrana, Raffles, Trans. Linn. Soc. xiii, 1821, p. 329 (immature—Sumatra); A., p. 493 (Tenasserim).

Sterna melanauchen, Temminck, Pl. Col. 1827 (Coast of Celebes); H., pp. 18, 142 (Koh Pennan, Bandon Bight); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 63 (Inner Gulf of Siam).

This beautiful tern, which in life has a delicate rosy flush over the under surface like in *S. dougalli*, is a species frequenting rocky islands and keeping as a rule well out to sea. It is common

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

on both coasts of Peninsular Siam and breeds there in May and June, laying a single egg on ledges of bare rock often only three or four feet above high tide.

There is unfortunately little doubt that *S. sumatrana* Raffles is founded on a half grown bird of this species, and the name will therefore have to replace the widely known *S. melanarchen*.

***Sterna anaetheta* *anaetheta* Scop.**

Sterna anaetheta, Scop., Del. Flor. et. Faun. Insubr. Pt. 2, 1786, p. 92 (Panay); A., p. 493 (Mergui); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 63; id. op. cit. iii, 1918, p. 85 (Inner Gulf of Siam).

Probably fairly common, well out to sea, along both coasts of Peninsular Siam. It is common in the Straits of Malacca and breeds in the Aroa Ids. In the Tioman Archipelago, off the coast of Pahang, it is also a breeding bird.

Sterna fuliginosa (Gm.), which differs from the above in its larger size and broader white frontal band and superciliaries, is recorded from Petchaburi by Parrot (Verhandl. Orn. Ges. Bayern, 8, 1908, p. 127). It is recorded from Pegu and Tounghoo by Saunders (Cat. Birds Brit. Mus. xxv, 1896, p. 110) and may possibly be found in the Gulf of Siam. We have seen no specimens referable to it from our area.

55. *Sterna sinensis* Gm.

Sterna sinensis, Gm., Syst. Nat. i, 1788, p. 60 (China); D., p. 80 (Patelung); E., p. 119 (Patani); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 37 (S. W. Siam).

These small terns, except in summer plumage, are extremely difficult to separate, and it is by no means certain that the alleged differences are constant. The present form has the shafts of the outer primaries white, and the size larger, the wing as a rule exceeding 180 mm. In the Malay Peninsula it breeds on the sandbanks on the rivers of the east coast for some distance up from their mouths.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

We have examined three specimens in breeding plumage from Koh Lak dated end of June, and three from Hua Hin, also in June, in Mr. W. J. F. Williamson's collection. Wing 174-180 mm. The black up the bill is a somewhat variable character, and in one bird from Hua Hin is practically absent.

***Sterna minuta* Linn.**

Sterna minuta, Linn., Syst. Nat. i, 1776, p. 228 (Europe).

Sterna sinensis, Hume, Stray Feathers, viii, 1879, p. 160 (Klang).

Sterna gouldi, Hume, op. cit. ix, 1880, p. 131.

Though not actually recorded as yet, the European Little Tern is certain to be found in winter on both coasts of Siam; we have it from the coast of Selangor. From *S. sinensis*, in winter plumage, it can be separated by its dark shafts to the two outer primaries and its smaller size.

***Sterna saundersi* Hume.**

Sterna saundersi, Hume, Stray Feathers v, 1877, pp. 324-6 (Karachi).

This eastern form can be recognized by having the shafts of the three outer primaries dark, and the wing about 170 mm. It is met with in fair numbers in the Straits of Malacca during the winter months, and will quite possibly be found on both Siamese coasts, though it has not as yet been recorded from the area.

***Anous stolidus* (Linn.).**

Sterna stolidus, Linn., Syst. Nat. i, 1766, p. 227 (American Seas).

Anous stolidus, Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1919, p. 88 (Koh Chuan, Inner Gulf of Siam).

The only Siamese locality for this cosmopolitan tern is the above island in the Inner Gulf of Siam, off the S. E. coast, where it was found breeding by Williamson in May 1918. It is extremely rare in the Straits of Malacca, but we have one specimen from Pulau Jarak, off the Dindings, shot by Mr. Seimund on November 16th, 1919, on which date large numbers were seen.

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

LIMICOLÆ.

PLOVERS, WADERS, SNIPE, ETC.

1	{ Nostrils impervious, form swallow-like	<i>Glaucola p. maldivarum.</i>	
	{ Nostrils pervious .. .. .	.. .. .	2
2	{ Eye very large, bill extremely stout and heavy .. .. .	.. .. .	3
	{ Eye not specially large, bill not specially heavy .. .. .	.. .. .	5
3	{ Toes three .. .. .	.. .. .	4
	{ Toes four	<i>Dromas ardeola.</i>	
4	{ Bill longer than head; plumage not strongly streaked	<i>Orthorhamphus m. scommophorus.</i>	
	{ Bill shorter than head; plumage strongly streaked	<i>Oedienemus æ. indicus.</i>	
5	{ Toes and claws enormously elongated .. .. .	.. .. .	6
	{ Toes and claws not specially elongated .. .. .	.. .. .	7
6	{ With frontal lappets; primaries without terminal processes	<i>Metopidius indicus.</i>	
	{ With no frontal lappets; primaries with terminal processes	<i>Hydrophasianus chirurgus.</i>	
7	{ With the nasal groove not extending beyond half the length of the culmen .. .. .	.. .. .	8
	{ With the nasal groove extending over the greater part of the upper mandible .. .. .	.. .. .	19
8	{ Bill not much longer than head .. .. .	.. .. .	9
	{ Bill very much longer than head	<i>Himantopus himantopus.</i>	
9	{ With the bill not markedly swollen at the tips of mandibles	<i>Arenaria interpres.</i>	
	{ With the bill markedly swollen at the tips of both mandibles .. .. .	.. .. .	10
10	{ With a spur or knob at the angle of the wing .. .. .	.. .. .	11
	{ With no spur or knob at the angle of the wing .. .. .	.. .. .	12
11	{ With a wattle in front of the eye	<i>Sarcogrammus i. atronichalis.</i>	
	{ With no wattle in front of the eye	<i>Hoplopterus ventralis.</i>	
12	{ With a hind toe	<i>Squatarola helvetica.</i>	
	{ With no hind toe .. .. .	.. .. .	13
13	{ Plumage above spotted with yellow	<i>Charadrius pluvialis fulvus.</i>	
	{ Plumage above not spotted with yellow .. .. .	.. .. .	14
14	{ No complete white ring round the neck .. .. .	.. .. .	15
	{ A complete white ring round the neck .. .. .	.. .. .	17
15	{ Bill stout; shaft of 3rd primary partly white .. .. .	.. .. .	16
	{ Bill slender; shaft of 3rd primary dark throughout; wing 6.5 inches	<i>Aegialitis veredus.</i>	
16	{ Larger; bill from gape 1.0; wing 5.5 inches	<i>Aegialitis geoffroyi.</i>	
	{ Smaller; bill from gape 0.75; wing 5.0 inches	<i>Aegialitis mongolus.</i>	
17	{ A black or fuscus band across the fore-breast	<i>Aegialitis dubius curonicus.</i>	
	{ No black or fuscus band across the fore-breast .. .. .	.. .. .	18
18	{ Bill larger	<i>Aegialitis alexandrinus dealbatus.</i>	
	{ Bill smaller	<i>Aegialitis a. peroni.</i>	

19	{	Toes markedly webbed	20
		Toes practically free to the base	34
20	{	Bill long, much exceeding the tail	21
		Bill moderate, not much if at all exceeding the tail	25
21	{	Bill strongly curved	22
		Bill almost straight	23
22	{	Smaller; top of head with a single median stripe	<i>Numenius ph. phaeopus.</i>
		Larger; top of head much striped	<i>Numenius a. lineatus.</i>
23	{	Bill widened and pitted at the tip	<i>Macrorhamphus g. taczanowskii.</i>
		Bill not widened or pitted at the tip	24
24	{	Tail barred	<i>Limosa limosa melanuroides.</i>
		Tail not barred	<i>Limosa lapponica novae-zelandiae.</i>
25	{	Bill from gape not less than the tarsus or only slightly less	26
		Bill from gape less than tarsus	33
26	{	Bill straight or slightly curved downwards	27
		Bill curved upwards	31
27	{	Tarsus much longer than middle toe and claw	29
		Tarsus equal to, or shorter than, middle toe and claw	28
28	{	Wing over 5 inches; rump white	<i>Totanus ochrophus.</i>
		Wing under 5 inches; rump like the back	<i>Tringoides hypoleucos.</i>
29	{	Legs red or reddish	30
		Legs sage-green	<i>Totanus stagnatilis.</i>
30	{	Secondaries pure white	<i>Totanus calidris.</i>
		Secondaries barred brown and white	<i>Totanus fuscus.</i>
31	{	Bill very slender	<i>Terekia cinerea.</i>
		Bill much stouter	32
32	{	Inner and middle toes united at the base by a membrane; bill stout; tarsus less than 2 inches	<i>Pseudoglossitis guttifer.</i>
		Inner and middle toes hardly united at the base by a membrane; bill more slender; tarsus more than 2.25 inches	<i>Glossitis nebularius.</i>
33	{	Wing 6.5 inches and over; sexes markedly different in breeding plumage	<i>Pavoncella pugnax.</i>
		Wing less than 5.5 inches; sexes practically alike in breeding plumage	<i>Rhyacophilus glareola.</i>
34	{	Eyes not placed far back in head	35
		Eyes placed far back in head	40
35	{	Bill from gape not longer than tarsus	36
		Bill from gape longer than tarsus	38
36	{	Only first primary with shafts white	37
		All primaries with shafts partly white	<i>Limoniites minuta.</i>
37	{	All tail feathers pale brown; middle toe 0.9 inch	<i>Limoniites m. subminuta.</i>
		Outer tail feathers pure white; middle toe 0.75 inch	<i>Limoniites temminckii.</i>
38	{	Bill straight; wing about 7 inches	<i>Tringa tenuirostris.</i>
		Bill decurved at tip; wing less than 6 inches	39
39	{	Bill narrow; wing about 5 inches	<i>Ancylorhynchus subarquatus.</i>
		Bill broad; wing about 4 inches	<i>Limicola platyrhyncha.</i>

40	{ Bill decurved, not pitted at tip; sexes dissimilar ..	<i>Rostratula capensis.</i>	41
	{ Bill almost straight, pitted at tip; sexes similar ..	.. ..
41	{ Black markings on head and neck longitudinal ..	.. ..	42
	{ Black markings on head and neck transverse ..	<i>Scolopax rusticola.</i>	
42	{ Distance between tips of shortest secondaries and longest primary less than 2 inches; tail feathers 18 ..	<i>Gallinago nemoricola.</i>	43
	{ Distance between tips of shortest secondaries and longest primary more than 2 inches ..	.. ..
43	{ Outer tail feathers not narrowed, and not exceeding 16 ..	<i>Gallinago gallinago.</i>	44
	{ Outer tail feathers narrowed, exceeding 18 ..	.. ..
44	{ Tail feathers 26; outer 8 on each side very narrow ..	<i>Gallinago sthenura.</i>	
	{ Tail feathers 20; outer 6 on each side rather narrow ..	<i>Gallinago megala.</i>	

56. *Glareola pratincola maldivarum* Forst.

Glareola (Pratincola) maldivarum, Forster, Faun. Ind., p. 11, 1795 (Maldives); I., p. 142 (Koh Lak).

Glareola orientalis, A., p. 454.

♂. Koh Lak, S. W. Siam. 6 April, 1919. (No. 5110).

"Iris dark; bill black, crimson at base; feet greyish black."

Total length 228; wing 189; tail 82; tarsus 37; bill from gape 25.5 mm.

Dromas ardeola Payk.

Dromas ardeola, Paykull, Kungl. Vet. Akad. Handl. Stockh. xxvi, 1805, pp. 182, 188, tab. 8 (India); Robinson, Journ. Fed. Malay States Mus. v, 1913, p. 17 (Pulau Pintu Gedong, Selangor).

The Crab-Plover has once been obtained in the Straits of Selangor and may occur on the west coast of Siam. In colour the bird is mainly black and white, and may be recognised by the characters given in the key.

57. *Orthorhamphus magnirostris scommophorus* Oberholser.*

Esacus magnirostris, A., p. 459 (Mergui Archipelago).

Orthorhamphus magnirostris scommophorus, Oberholser, Proc. U. S. Nat. Mus. 55, 1919, p. 133 (Tambelan Ids.).

♂ ad. De Lisle Id. (Koh Piam), W. Siam. 19 February, 1919. (No. 4128).

* We use Oberholser's name, though, as Mathews and Iredale point out (Man. Birds Australia, i, 1921, p. 118), its application is based on a misconception due to an error in labelling.

A. Hume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornithologie der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

"Iris yellow-brown; bill black, yellowish green at base; tarsi pale wax-yellow, toes more greyish slate."

Total length 532; wing 272; tail 128; tarsus 88; bill from gape 85 mm.

This Stone-Plover has not been recorded previously from Siam. It has been seen or obtained on several occasions in the Mergui Archipelago, of which De Lisle Id. is practically one. The present bird was one of a pair feeding on the edge of a reef at low tide.

This form is stated to differ from the typical Australian race only in its slightly shorter bill. No large series appear to have been examined.

Oedicnemus oedicnemus indicus (Salvad.).

Oedicnemus indicus, Salvad., Atti Soc. Ital. Sci. Nat. viii, 1866, p. 380 (Himalayas).

Oedicnemus scolopax, C. ii, p. 356; Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 33 (near Bangkok).

The Indian Stone-Curlew will not improbably be found on dry plains in S. W. and Peninsular Siam. It can be separated from the preceding by its relatively smaller and shorter bill and by its more streaked and variegated plumage.

58. *Metopidius indicus* (Lath.).

Parra indica, Latham, Ind. Orn. ii, 1790, p. 765 (India).

Metopidius indicus, G., p. 152 (Ratburi and Petchaburi).

♂, ♀. Koh Lak, S. W. Siam. 7 April, 1919. (Nos. 5142, 5144).

"Iris dark; bill yellow, base of upper mandible, from nostrils, and shield dull olive-green; feet pale red-green, tibia more yellowish".

Total length ♂, 270; ♀, 290; wing ♂, 162; ♀, 173; tail ♂, 43; ♀, 43; tarsus ♂, 70; ♀, 74; bill from gape ♂, 32; ♀, 37 mm.

These birds do not appear to be very young—the feathers of the upper surface having no sandy margins—but the under surface is

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

uniform whitish, strongly washed with buff on the breast. The crowns are chestnut, streaked with black, and the frontal wattles are smaller than in dark bellied birds. Possibly they represent a non-breeding, as distinct from a juvenile, plumage. Ten specimens in Mr. Williamson's collection from various parts of Siam, dated November to April, all have the under surface black.

59. *Hydrophasianus chirurgus* (Scop.).

Tringa chirurgus, Scop., Del. Flor. et Faun. Insubr. ii, 1786, p. 92 (Philippines).

Hydrophasianus chirurgus, G., p. 152 (Ratburi and Petchaburi); M. l., p. 38 (Krabin, C. Siam).

♀. Koh Lak, S. W. Siam. 6 April, 1919. (No 5211).

"Iris dark; bill bluish sea-green, darker at base; feet sea-green".

Total length 213; wing 215; tail 63; tarsus 52.5; bill from gape 32 mm.

This Jacana, with white lower plumage (winter), was shot on a shallow lagoon together with grebes and the preceding species. It has not hitherto been recorded from Siam, with the exception of Gairdner's and Stuart Baker's specimens. Mr. W. J. F. Williamson informs us, however, that he found the bird in considerable numbers at Klong Rangsit, a little to the north of Bangkok, in January 1916, on flooded ground largely covered with reeds and coarse grasses. In the Malay Peninsula it is widely distributed but extremely rare.

60. *Himantopus himantopus* (Linn.).

Charadrius himantopus, Linn., Syst. Nat. i, 1766, p. 255 (Europe).

Himantopus himantopus, L., p. 145 (between Ratburi and Koh Lak).

Himantopus candidus, Williamson, Journ. N. H. Soc. Siam, iii, 1918, p. 35 (Meklong); M. l., p. 39 (Paklat, nr. Bangkok).

The above records by Gyldenstolpe, Williamson and Stuart Baker are the sole ones from the Kingdom of Siam*. The bird has

*We believe this bird to be fairly common in suitable localities, at all events in the central parts of the country. It is well-known to the Siamese and has a distinctive name, *Nok tin thian* (นกตีนเทียน).—Eds.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salunga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

been obtained twice in the Peninsula, in Jelebu and in Singapore Island.

61. *Arenaria interpres* (Linn.).

Tringa interpres, Linn., Syst. Nat. i, 1766, p. 248 (Europe).

Streptilas interpres, E., p. 119 (Patani Coast).

Arenaria interpres, J., p. 138 (Koh Muk, Trang).

The above specimens, from the coasts of Patani and Trang, are the only ones recorded from Siam. In the Malay Peninsula it is sparingly distributed along the western coast from August to April.

62. *Sarcogrammus indicus atronuchalis* Blyth.

Sarcogramma atrogularis, Blyth, Journ. Asiat. Soc. Bengal, xxxi, 1862, p. 345 (Toung-hoo).

Lobivanellus atronuchalis, Blyth in Jerdon's Birds India, iii, 1864, p. 648 (Burma); A., p. 457; B., p. 82 (Salanga); C. ii, p. 374.

Sarcogrammus atronuchalis, F., p. 11 (Trang); G., p. 152 (Ratburi and Petchaburi).

Sarcogrammus indica atronuchalis, I., p. 146 (Koh Lak); J., p. 138 (Terutau); K., p. 85 (Koh Lak); L., p. 91 (Ghirbi and Pulau Panjang).

♀. Koh Lak, S. W. Siam. 10 April, 1919. (No. 5223).

"Iris dark; tip of bill black, base, lappets and eye-ring coral red; feet pale lemon-yellow."

Total length 315; wing 215; tail 114; tarsus 71; bill from gape 34 mm.

This Wattled Plover is exceedingly common in open spaces over the whole of the area, and also in suitable localities over the rest of the Malay Peninsula down to Johore; met with as a rule in small flocks up to seven or eight individuals.

63. *Hoplopterus ventralis* (Wagl.).

Charadrius ventralis, Wagl., Syst. Av. Charadrius, p. 59, sp. ii, (1827).

Hoplopterus ventralis, A., p. 457 (Pakchan); C. ii, p. 375; F., p. 11 (Trang); G., p. 152 (Ratburi and Petchaburi).

Probably rare and attaining its southern limit in Trang. Specimens from that locality, collected by Dr. W. L. Abbott, are in

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

the United States Natural History Museum, while the species was seen but not procured by us in the same district in 1909.

64. *Squatarola helvetica* (Linn.).

Tringa helvetica, Linn., Syst. Nat. i, 1766, p. 250. (Switzerland).

Squatarola squatarola, L., p. 143 (Koh Lak).

Squatarola helvetica, J., p. 138 (Koh Muk, Trang).

The Grey Plover is probably not uncommon during the winter months in the west coast of Siam, as it is fairly abundant further south: on the east coast it may be expected to be rarer.

65. *Charadrius pluvialis fulvus* Gm.

Charadrius fulvus, Gm., Syst. Nat. i, 1788, p. 687 (Tahiti); A., p. 455 (Pakchan); C. ii, p. 364; G., p. 152 (Ratburi and Petch-aburi.)

Charadrius dominicus, D., p. 79 (Patelung); E., p. 116 (Patani); K., p. 85 (Koh Lak).

Charadrius longipes, B., p. 82 (Junk Seylon).

Charadrius dominicus fulvus, L., p. 143 (Koh Lak).

♂. Tapli, Pakehan, Peninsular Siam. 8 March, 1919. (No. 4493).

"Iris dark; bill greenish black, paler at base; feet pale greyish green."

Total length 244; wing 101; tail 65; tarsus 40; bill from gape 28 mm.

Common in the winter months.

Aegialitis veredus (Gould).

Charadrius veredus, Gould, P. Z. S., 1848, p. 38 (Northern Australia).

Charadrius asiaticus, Finsch, Ibis, 1872, p. 144 (Saigon).

Though there are no actual records of the occurrence of the Eastern Dotterel in Siam, we have inserted the species in the key, as it has been recorded from several places in the Malay Peninsula and from Cochin-China and is certain to be met with in Siam in the winter months.

66. *Aegialitis geoffroyi* (Wagl.).

Charadrius geoffroyi, Wagl., Syst. Av., Charadrius, p. 61, No. 19, 1827 (Java); K., p. 85 (Koh Lak).

Cirrhipidesmus geoffroyi, B., p. 83.

Ochthodromus geoffroyi, L., p. 143 (Koh Lak).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1893.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♀. Koh Lak, S. W. Siam. 7 April, 1919. (No. 5139).

"Iris dark; bill black; feet pale bluish slate, tinged green."

The Sand-Plover occurs sparingly throughout the Malay Peninsula, and probably Siam, though not nearly as common as the following.

67. *Aegialitis mongolus* (Pall.).

Charadrius mongolus, Pall., Reis. Russ. Reichs, iii, 1776, p. 700 (Russia).

Aegialitis mongolus, B., p. 455; C. ii, p. 368; E., p. 118 (Patani); I., p. 143 (Koh Lak).

Ochthodromus pyrrhothorax, F., p. 12 (Terutau); H., p. 142 (Koh Pennan); J., p. 139 (Koh Muk).

Cirripidesmus geoffroyi, B., p. 83 (Junk Seylon).

2 ♀. Koh Lak, S. W. Siam. 7 April, 1919.

"Iris black; bill black; feet pale greenish grey with a tinge of blue."

Total length 182, 182; wing 128, 120; tail 48, 45; tarsus 33.5, 32.5; bill from gape 22, 20.5 mm.

Two races of this Sand-Plover—a western one, *Ae. pyrrhothorax*, and the present one—are supposed to occur in our area: the majority of specimens should perhaps be referred to the former, which is stated to have a slightly longer tarsus. It is, however, practically impossible to discriminate with any certainty individual birds in winter plumage, and we have therefore retained all the local birds under the older name.

68. *Aegialitis dubius curonicus* (Gm.).

Charadrius curonicus, Gm., Syst. Nat. i, pt. 2, 1788, p. 692 (Curonia).

Aegialitis curonicus, A., p. 456 (Pakchan).

Aegialitis minutus, A., p. 456 (Assoon).

Aegialitis fluviatilis, B., p. 83 (Junk Seylon).

Aegialitis dubia, C. ii, p. 370; E., p. 118 (Patani); G., p. 152 (Ratburi and Petchaburi).

Aegialitis jerdoni, C. ii, p. 371.

Aegialitis dubius curonicus, Hartert and Jackson, Ibis, 1915, p. 533.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

2♂. Koh Lak, S. W. Siam. 3, 4 April, 1919. (Nos. 5007, 5044).

"Iris dark hazel; eye lappet chrome or pale chrome; bill black, base of lower mandible yellow; feet dirty flesh, joints greyish, toes black."

Total length 170, 172; wing 108, 148; tail 64, 63; tarsus 23.5, 25; bill from gape 13, 16 mm.

These specimens are in full breeding plumage, and on that consideration, and from the date on which they were obtained, should probably be referred to the tropical resident race, *Ae. d. jerdoni*, Legge, Proc. Zool. Soc. 1880, p. 39 (Ceylon and Central India), if that race is to be kept distinct, as it probably should be. The northern race should also occur in winter on migration, but is difficult to distinguish in the series before us.

69. *Aegialitis alexandrinus dealbatus* Swinh.

Aegialitis dealbatus, Swinh., P. Z. S. 1870, p. 138 (South Coast, China).

Aegialitis alexandrina, I., p. 145 (Koh Lak).

Charadrius alexandrinus dealbatus, Hartert and Jackson, Ibis, 1915, p. 528; K., p. 85 (Koh Lak).

Aegialitis cantianus, A., p. 456 (Mergui).

All specimens of this Plover that we have seen from Siam and from the Malay Peninsula in winter have large bills, from 15—19 mm. measured on the bare part of the culmen, and therefore must be considered to belong to the Chinese and Hainan race in winter quarters. We have no evidence that the typical *Ae. a. alexandrinus* (i. e., the bird with a small bill) comes as far south as the Malay Peninsula, though our series is not large. On the other hand, we think it probable that many specimens which are really females or young examples of the following race have been confused with the present form or with *Ae. a. alexandrinus*.

Kloss notes the soft parts as, "Iris dark; bill black; legs stone-grey or yellowish grey; feet grey-black."

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. 1.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

70. *Aegialitis alexandrinus peroni* (Bp.).

Charadrius peroni, Bp., Compt. Rend. xlii, 1856, p. 417 (Java).

Aegialitis alexandrinus, H., p. 142 (Koh Penan and Koh Samui).

Aegialitis peroni, Vaughan and Jones, Ibis, 1913, p. 362 (South East China); I., p. 144 (Koh Lak).

Aegialitis alexandrinus peroni, J., p. 139 (Pulau Telibun, Trang).

We have from the Malay Peninsula and various islands off the coast a considerable series of a small plover, with the wing always below 100 mm., and which therefore cannot, apart from other considerations, be referred to any of the usually recognized races of *Ae. alexandrinus*. Our series has been compared with a large number of specimens of true *Ae. peroni* from Borneo, with which they agree. We have little doubt that many specimens, especially females or immature birds, have been recorded as *Ae. alexandrinus*, although really this form which, in any event, can only be regarded as a resident tropical race diminished in size and intensified in colour precisely analogous with *Ae. c. jerdoni*. Lieut. R. E. Vaughan and Staff Surgeon K. H. Jones record this form from S. E. China, stating that it arrives from the north from August to November and is resident during the winter months.

71. *Numenius arquatus lineatus* Cuv.

Numenius lineatus, Cuv., Regne. Anim. i, 1829, p. 521; A., p. 450 (Pakchan); Hume, Stray Feath. ix, 1880 (Tongka).

Numenius arquatus, C. ii, p. 412 (Tenasserim Coast); F., p. 12 (Peninsular Siam); I., p. 145 (Koh Lak).

The Curlew is apparently rare and always hard to secure.

72. { *Numenius phaeopus phaeopus* (Linn.).
 { *Numenius phaeopus variegatus* (Scop.).

Scolopax phaeopus, Linn., Syst. Nat. i, 1766, p. 243 (Europe).

Tantalus variegatus, Scopoli, Del. Flor. et Faun. Ins. Ubi. ii, 1786, p. 92 (Luzon).

Numenius phaeopus, A., p. 460 (Pakchan); C. ii, p. 411 (Tenasserim coast); F., p. 12 (Peninsular Siam).

Common in large flocks on the western coast in winter: a few specimens found single as late as June. Birds from Siam may be-

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919, (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919, (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920, (third part).

long to either of these forms, which are not very easily distinguished from each other.

73. *Macrorhamphus griseus taczanowskii* (Verr.).

Micropalama taczanowskia, Verreaux, Rev. et Mag. Zool. 1860, p. 206, pl. 14 (Dauria).

Macrorhamphus taczanowskii, Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 62 (Lakon, Peninsular Siam).

We have a specimen obtained in the Dindings by Mr. R. J. Wilkinson's collectors.

***Limosa limosa melanuroides* Gould.**

Limosa melanuroides, Gould, P. Z. S. 1846, p. 84 (Port Essington); Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 62 (Inner Gulf of Siam).

No Godwits are common anywhere in our area, but this species is less rare than *L. l. novae-zelandiae*.

74 *Limosa lapponica novae-zelandiae* Gray.

Limosa lapponica var. *novae-zelandiae*, Gray, Voy. Erebus and Terror, Birds, 1846, p. 13.

Limosa novae-zelandiae, Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 62 (Bandon).

We have only seen one specimen of this species, a male in incipient breeding plumage, from Temerloh, Klang Straits.

75. *Tringoides hypoleucos* (Linn.).

Tringa hypoleucos, Linn., Syst. Nat. i, 1766, p. 250 (Europe).

Tringoides hypoleucos, A., p. 463 (Mergui); B., p. 83 (Salanga Id.); F., p. 13 (Malay Peninsula); L., p. 146 (Gulf of Siam); J., p. 140 (Telibon Id); L., p. 91 (Ghirbi and Pulau Panjang).

1 ♂, 1 ♀. Koh Lak, S. W. Siam. 3—6 April, 1919. [Nos. 5009, 5103].

Total length ♂, 200; ♀, 200; wing, ♂, 108; ♀, 112; tail ♂, 60; ♀, 62; tarsus ♂, 24.5; ♀, 23; bill from gape ♂, 25; ♀, 28 mm.

"Iris dark; bill greenish black, paler at base; feet greenish grey, yellower at knees."

Of universal distribution, practically throughout the year.

A. Hume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i

E. O. Grant, Fascioli Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Totanus ochrophus (Linn.).

Tringa ochrophus, Linn., Syst. Nat. i, 1766, p. 250 (Europe).

Totanus ochropus, Williamson, Journ. Nat. Hist. Soc. Siam, i, 1914, p. 48 (Bangkok); I., p. 145 ("Every part of Siam").

We doubt if this species is anything like as common as stated by Gyldenstolpe, who, it may be observed, did not obtain specimens. We have neither obtained nor seen it from any part of Siam.

We have not sufficient material to express an opinion as to whether the Eastern form, described by Mathews (Austral. Av. Record, i, 1913, p. 188) from Assam as *Tringa ochropus assami*, is really valid.

76. Totanus stagnatilis Bechst.

Totanus stagnatilis, Bechstein, Orn. Taschenb., pt. 2, 1803, p. 292, pl.; A., p. 463 (Yea-boo, Moulmein); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 62 (Tachin and Bangplaso, Inner Gulf of Siam).

1 ♀. Koh Lak, S. W. Siam. 4 April, 1919. [No. 5036].

Total length 252; wing 147; tail 70; tarsus 52; bill from gape 43 mm.

"Iris dark; bill black, paler at base; feet yellowish sage:

The above bird is in breeding plumage, with black patches in the feathers of the upper surface. It is a very rare bird throughout our area.

The Eastern birds have been separated under the name *Totanus stagnatilis horsfieldi* ¹ (Sykes).

77. Totanus calidris (Linn.).

Scolopax calidris, Linn., Syst. Nat. i, 1766, p. 245 (Europe).

Totanus calidris, A., p. 464 (Pakchan); I., p. 145 (Gulf of Siam); J., p. 140 (Koh Muk, Trang).

Extremely common everywhere on mud-flats, in a few instances arriving as early as August and staying as late as May.

¹ *Limosa horsfieldi*, Sykes, P. Z. S. 1833, p. 163 (Dukhun, India).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

78. *Totanus fuscus* (Linn.).

Scolopax fusca, Linn., Syst. Nat. i, 1766, p. 243 (Europe).

Totanus fuscus, Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 35 (Chainat, Central Siam, and mouth of Chao Phya river, near Bangkok).

Williamson's birds above noted are the sole recorded specimens from Siam.

79. *Terekia cinerea* (Gülden.).

Scolopax cinerea, Güldenstadt, Nov. Comm. Petrop., xix, 1774, p. 473, pl. 19 (S. E. Russia).

Terekia cinerea, A., p. 460 (Tavoy); C. ii, p. 407 (Tenasserim); E., p. 118 (Jalor); F., p. 13 (Peninsular Siam); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 35 (Mouth of Chao Phya river, near Bangkok).

Probably common everywhere in winter at river mouths and on mud-flats.

Pseudoglossitis guttifer (Nordm.).

Totanus guttifer, Nordman in Erman's Reise u. d. Erde, 1835, p. 17.

Totanus haughtoni, C. ii, p. 406 (Amherst, Tenasserim).

Pseudoglossitis guttifer, F., p. 13 (Kedah and Perak).

This species is rare in collections, probably on account of its close resemblance to the true Greenshank. It is certain to be met with on the coasts of Trang and Setul, and probably in other localities also.

80. *Glottis nebularius* (Günner).

Scolopax nebularius, Günner, Leem. Lap. Besch., 1767, p. 251 (Lapland).

Totanus glottis, A., p. 463 (Tenasserim town).

Totanus cane-cens, C. ii, p. 402.

Glottis nebularius, F., p. 13 (Terutau Id.); I., p. 146 (Koh Lak); J., p. 140 (Koh Muk, Trang).

The Greenshank is very common on the western coast; it is probably a good deal rarer on the eastern side of the Peninsula.

Pavoncella pugnax (Linn.).

Tringa pugnax, Linn., Syst. Nat. i, 1766, p. 247 (Europe).

Machetes pugnax, C. ii, p. 396 (Lower Pegu: mouth of Sittang river).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

The Ruff is almost certain to be eventually found in Lower Siam: there are somewhat doubtful records from the Malay Peninsula.

81. *Rhyacophilus glareola* (Linn.).

Tringa glareola, Linn., Syst. Nat. i, 1766, p. 250 (Sweden).

Rhyacophilus glareola, A., p. 462 (Pakchan); B., p. 83 (Salanga Id.); D., p. 80 (Patelung); F., p. 13 (Trang); I., p. 146 (Koh Lak).

Totanus glareola, C. ii, p. 401.

1 ♀ ad. Mamoh, Pakchan. 27 February, 1919. [No. 4294].

5 ♂, 8 ♀. Koh Lak, S. W. Siam. 3—9 April, 1919. [Nos. 5008, 5334—5, 5084, 5104—7, 5130—1, 5159, 5181, 5210].

"Iris dark; bill black, greenish at base; feet sage-green or greenish grey."

Total length ♂, 225, 215, 216, 220; ♀, 220, —, 210, 212, 211, 223, 208, 223, 223.

Wing ♂, 125, 117 (m.), 129, 122, 126; ♀, 128, 125, 124, 127, 126, 128, 121, 127, 127.

Tail ♂, 54, 48, 57, 58; ♀, 53, 60, 45, 54, 53, 56, 50, 55, 60.

Tarsus ♂, 38.5, 38, 36, 35, 33.5; ♀, 38, 34, 37.5, 39, 37, 38, 34, 36, 38.

Bill from gape ♂, 31, 31, 33, 30, 31; ♀, 34, —, 32, 33, 30, 33.5, 32, 33, 34 mm.

Very common everywhere.

82. { *Limonites minuta minuta* (Leisl.).

83. { *Limonites minuta ruficollis* (Pall.).

Tringa minuta, Leisl. in Bechst. Naturg. Deutschl. Nachtr. i, 1912, p. 74; A., p. 461 (Mergui); C. ii, p. 389 (Mergui, Tongka); E., p. 118 (Patani).

Tringa ruficollis, Pallas, Reis. Russ. Reich. iii, 1766, p. 700 (Siberia).

Limonites ruficollis, Sharpe, Cat. Birds Brit. Mus. xxiv, 1896, p. 547 (Mergui, Tongkah Id.); F., p. 14 (Kedah).

We are unable to disentangle the records relating to the Eastern and Western series of this Stint, viz., *L. m. minuta* and *L. m. ruficollis*, which are almost impossible to discriminate in

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

winter plumage. Both occur, the latter in very much larger numbers than the former.

84. *Limonites minutilla subminuta* (Middend.).

Tringa subminuta, Middendorf, Reise in Nord. und Ost. Sibir. ii. 1851, p. 222, pl. xix, fig. 6 (Siberia); Williamson, Journ. N. H. Soc. Siam, i, 1915, p. 199 (Bangkok).

Tringa ruficollis, A., p. 461 (near Tavoy).

Limonites damacensis, Sharpe, Cat. Birds Brit. Mus. xxiv, 1896, p. 555 (Tavoy and Salanga Id.).

Erobia subminuta, M. 1, p. 39 (Klong Wang Hip, Peninsular Siam).

1 ♂. Koh Lak, S. W. Siam. 7 April, 1919. [No. 5134].

Total length 155; wing 90; tail 48; tarsus 23; bill from gape 18.5 mm.

"Iris dark; bill black, dull greenish yellow at base of lower mandible; feet dull greyish sage-green, darker on joints."

Very common.

***Limonites temmincki* (Leisl.).**

Tringa temmincki, Leisl. in Bechst. Naturg. Deutsch. Nachtr. ii, 1812, p. 78 (Germany); A., p. 461 (Tavoy); C. ii, p. 392 (Tenasserim); Williamson, Journ. Nat. Hist. Soc. Siam, i, 1915, p. 199 (Bangkok).

This Stint has not been recorded as yet from the Malay Peninsula: it is however almost certain to occur in the northern parts.

85. *Tringa tenuirostris* (Horsf.).

Totanus tenuirostris, Horsf., Trans. Linn. Soc. xiii, 1821, p. 192 (Java).

Tringa crassirostris, Faun. Jap. 1847, p. 107, pl. 64; Williamson, Journ. N. H. Soc. Siam, iii, 1918, p. 35 (near Meklong, Central Siam).

Williamson found the Eastern Knot common in the above locality. In the Malay Peninsula, whence we have only four specimens, it is a very rare bird.

86. *Ancylochilus subarquatus* (Güldenst.).

Scolopax subarquata, Güldenstadt, Nov. Comm. Petrop. xix, 1774, p. 471.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Tringa subarquata A., p. 460 (Mergui); E., p. 118 (Patani); Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 62 (Lakon and Bandon, Peninsular Siam).

Pelidna subarquata, C. ii, p. 395 (Tenasserim).

Probably fairly common. Gyldenstolpe (Ibis, 1920, p. 761) records this bird under the name *Tringa ferruginea chinensis* J. E. Gray.

87. *Limicola platyrhyncha* (Temm.).

Tringa platyrhyncha, Temminck, Man. d'Orn. 1815, p. 398; E., p. 118 (Patani); Williamson, Journ. N. H. S. Siam, iii, 1918, p. 36 (Mouth of Chao Phya river, near Bangkok).

Not common, though large flocks usually occur. Recorded by Gyldenstolpe (Ibis, 1921, p. 761) as *Limicola falcinellus* (Brünnich).

88. *Rostratula capensis* (Linn.).

Scolopax capensis, Linn., Syst. Nat. i, 1776, p. 246 (Cape of Good Hope).

Rostratula capensis, Herbert. Journ. Nat. Hist. Soc. Siam, i, 1914, p. 54 (Bangkok).

In the Malay Peninsula the Painted Snipe is a fairly common species; the same will be true of it in most parts of Siam.

Scolopax rusticola Linn.

Scolopax rusticola, Linn., Syst. Nat. i, 1766, p. 243 (Europe); A., p. 459 (near Tavoy).

The Woodcock has once been obtained in the Malay Peninsula and there are one or two visual records of fair credibility; it is therefore likely to occur in Peninsular Siam. Mr. W. J. F. Williamson informs us that the bird is fairly common in Northern Siam in the winter months, and that it is regularly obtained by sportsmen, from near Chiangmai down to Raheng, between October and March.

Gallinago nemoricola Hodg.

Gallinago nemoricola, Hodgson, P. Z. S. 1836, p. 8 (Nepal); A., p. 459 (Observed near Malewun).

We include this species on Davison's very emphatic statement. It should be noted, however, that the species bears a strong

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

resemblance to *G. megala*, with which presumably Davison was not acquainted, but which has, of late years, been proved to occur in considerable numbers both in the Malay Peninsula and in the Madras Presidency. No specimens of *G. nemoricola* shot by Davison are included in the Hume collection now in the British Museum.

89. *Gallinago gallinago* (Linn.).

Scolopax gallinago, Linn., Syst. Nat. i, 1766, p. 244 (Europe).

Gallinago coelestis, G., p. 152 (Ratburi and Petchaburi).

Gallinago gallinago, Sharpe, Cat. Birds Brit. Mus. xxiv, 1896, p. 641 (Salanga Id.).

The Fantail will be found in every large bag of snipe obtained in Siam, especially in the middle of the season. It is very common at Bangkok, where (*vide* Williamson, in *litt.*) it usually arrives in the latter half of September, i. e., a month or so later than the Pintail, and also leaves earlier. The latest recorded date for the Fantail in Bangkok is 30th March, by which date it is getting scarce, although the Pintails are still numerous.

90. *Gallinago sthenura* (Kuhl).

Scolopax sthenura, Kuhl, Bonap. Ann. Stor. Nat. Bologna, iv, 1830, fasc. xiv, p. 335 (Sunda Islands).

Gallinago stenura, A., p. 459 (Pakeban); Sharpe, Cat. Birds Brit. Mus. xxiv, 1896, p. 622 (Salanga Ids.); E., p. 117 (Patani); F., p. 14 (Trang); G., p. 152 (Ratburi and Petchaburi); L., p. 91 (Pualu Panjang).

1 ♂. Koh Lak, S. W. Siam. 7 April, 1919. [No. 5141].

Total length 255; wing 126; tail 50; tarsus 32; bill from gape 61 mm.

"Iris dark; bill yellowish brown, apical third black; feet grey, toes darker."

According to Williamson (*in litt.*), the Pintail arrives in Bangkok during the first half of August: the earliest recorded date is the 10th.

Gallinago megala Swinh.

Gollinago megala, Swinhoe, Ibis, 1867, p. 343 (Pekin).

There are no actual records of this Chinese Snipe from Siam,

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

but it is almost certain to occur in small numbers throughout the country. It is a larger, more solidly built, bird than either of its local congeners, and can be at once recognized by the characters of the outer tail-feathers as defined in our key.

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919.
(second part). |
| K. Kloss, Ibis, 1918. | |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.
(third part). |

GRUIDAE

CRANES.

91. *Antigone antigone sharpii* (Blanford).

Grus (Antigone) sharpii, Blanford, Bull. Brit. Orn. Club, v, 1895, p. vii (Burmese provinces).

Grus antigone, G., p. 30 (Ratburi).

Grus sharpii, G., p. 152 (Ratburi and Petchaburi).

We saw this species in the rice fields near Sawi Bay, S. of Chumpon, in April 1919. It is occasionally met with in the north of the Peninsula, but we know of no authentic instances of its occurrence south of Kuala Kangsar.

Penang specimens in the British Museum are almost certainly from Trang or Perlis.

A. Hume, & Davison, *Stray Feathers*, vi, 1878.
 B. Müller, *Die Ornith. der Insel Salanga*, 1882.
 C. Oates, *Birds Brit. Burmah*, Vols. i. & ii, 1883.
 D. Bonhote, *P. Z. S.* 1901, Vol. i

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.
 F. Robinson and Kloss, *Ibis*, 1910-11.
 G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.
 H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

IBIDIDAE

IBISES.

- | | | | |
|---|---|------------------------------|---|
| 1 | { Smaller, plumage white, dissected | <i>Ibis melanocephala.</i> | |
| | { Larger: plumage dark .. .. | .. .. | 2 |
| 2 | { Neck feathered to nape, smaller.. .. | <i>Inocotis davisoni.</i> | |
| | { Neck naked to nape, larger | <i>Thaumatibis gigantea.</i> | |

92. *Ibis melanocephala* (Lath.).

Tantalus melanocephalus, Lath., Ind. Orn. ii, 1790, p. 709 (India).

Ibis melanocephala, C. ii, p. 268 (Tenasserim); G., p. 152 (Ratburi and Petchaburi); H., p. 89 (Bandon river).

The white Ibis is fairly abundant on both coasts in suitable localities, but is usually almost impossible to approach.

93. *Inocotis davisoni* (Hume).

Geronticus davisoni, Hume, Stray Feath. iii, 1875, p. 300 (Pakchan).

Graptcephalus davisoni, Elliot, P. Z. S. 1877, p. 490; A., p. 485 (Pakchan); C. ii, p. 269 (South Tenasserim); F., p. 17 (Trang); H., p. 89 (Bandon); J., p. 141 (Pulau Lontar); L., p. 92 (Ghirbi and Koh Naka Yai).

Pseudibis papillosa, B., p. 85 (Junk Seylon).

This dark Ibis, though it appears to us but little more than a strongly marked race of the Indian *I. papillosa*, has been elevated to generic rank, partly on the shape of its cranium, and partly on account of the alleged absence of rugose papillæ in the occiput and, therefore, different colour. As a matter of fact our series shows that these papillæ are definitely present, at any rate at certain seasons, and we do not think that the bird can profitably be kept generically distinct. As regards bare parts, our birds are consistently coloured and show no trace of red on the head, as is reported in the case of birds from E. Siam, Cambodia and Yunnan, which have been named *G. harmandi* Oustalet. These birds are either distinct from the present species or, more probably, are to be referred to the true *I. papillosa*.

94. *Thaumatibis gigantea* (Oust.).

Ibis gigantea, Oustalet, Bull. Soc. Philomath. (7), i, 1877, p. 25 (Cochin-China).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).
M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Thaumatibis gigantea, Elliot, P. Z. S. 1877, p. 489; F., p. 17, Pl. I. text figs. 5, 7 (Trang); G., p. 152 (Ratburi and Petchaburi); Williamson, Journ. Nat. Hist. Soc. Siam. ii, 1916, p. 71, Pl. (Ratburi); id. op. cit. iv, 1921, p. 196 (Coast of Cambodia).

We saw one specimen of this rare Ibis (which is, however, apparently still fairly common on the Cambodian coast) from the train in a marshy patch of ground, just south of Koh Lak.

Elsewhere in Peninsular Siam it has been obtained on Pulau Terutau by Dr. W. L. Abbott.

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| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905. |
| B. Müller, Die Ornis der Insel Salanga, 1882. | F. Robinson and Kloss, Ibis, 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

CICONIIDAE.

STORKS.

- | | | | | |
|---|--|----|---------------------------------------|---|
| 1 | { Mandibles separated in middle | .. | <i>Anastomus oscitans</i> . | |
| | { Mandibles normal | .. | .. | 2 |
| 2 | { Top of head with a bony cap, unfeathered | .. | .. | 3 |
| | { Top of head without a bony cap, variably feathered | .. | .. | 4 |
| | { Larger, with a gular pouch; wing 30 inches or over | .. | <i>Leptoptilus dubia</i> . | |
| 3 | { Smaller, without a gular pouch; wing 27 inches or under | .. | <i>Leptoptilus javanica</i> . | |
| 4 | { Bill straight, crown feathered | .. | .. | 5 |
| | { Bill decurved, crown naked | .. | .. | 6 |
| 5 | { Feathers of the neck white, silky | .. | <i>Dissoura episcopus neglecta</i> . | |
| | { Feathers of the neck black, normal | .. | <i>Xenorhynchus asiaticus</i> . | |
| 6 | { Larger, secondaries rosy in adults, wing-coverts black and white | .. | <i>Pseudotantalus leucocephalus</i> . | |
| | { Smaller, secondaries with no rosy flush, wing-coverts white | .. | <i>Pseudotantalus lacteus</i> .* | |

95. *Leptoptilus dubia* (Gm.).

Ardea dubia, Gmelin, Syst. Nat. i, 1788, p. 624 (India and Africa).

Leptoptilus argala, C. ii, p. 262 (Tenasserim).

Leptoptilus dubia, G., p. 152 (Ratburi and Petchaburi); I., p. 141 (Ratburi).

We have seen no specimens of the larger Adjutant Bird from the Malayan area or from Peninsular Siam, and doubt if it occurs south of Ratburi. In life it can be distinguished by the possession of a gular pouch, by its much larger size, and by having a grey band across the secondary coverts in breeding birds, not a coppery red one as in *L. javanica*. The species is said to occur in Java, but the identification appears to rest on skeletons and skulls.

96. *Leptoptilus javanica* (Horsf.).

Ciconia javanica, Horsfield, Trans. Linn. Soc., xiii, 1821, p. 188 (Java).

Leptoptilus javanicus, A., f. 469 (Pakchan); I., p. 141 (Koh Lak); L., p. 92 (Junk Seylon).

Leptoptilus dubius F., p. 16 (Trang).

Common throughout the area, generally in rice fields, in mangrove swamps and on the coastal flats.

*Included in the key in the possible event of its occurrence in the area.

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

97. *Xenorhynchus asiaticus* (Lath.).

Mycteria asiatica, Latham, Ind. Orn. ii, 1790, p. 670 (India).

Xenorhynchus asiaticus, G., p. 152 (Ratburi and Petchaburi); J., p. 141 (Telibun Straits, Trang).

Not uncommon, but hard to obtain; specimens in the British Museum attributed to Penang are probably from the southern parts of Peninsular Siam.

98. *Dissoura episcopus neglecta* Finsch.

Dissoura neglecta, Finsch., Ornith. Monatsber., 1904, p. 94 (Java).

Melanopelargus episcopus, A., p. 469 (Pakchan).

Dissoura episcopus, B., p. 85 (Junk Seylon); E., p. 115 (Jalor); F., p. 16 (Trang); G., p. 152 (Ratburi and Petchaburi); H., pp. 88, 142 (Bandon and Koh Samui); L., p. 91 (Ghirbi).

Dissoura episcopus neglecta, L., p. 140 (Hat Sanuk, nr. Koh Lak)

Very common in rice fields, etc., throughout the northern part of the Malay Peninsula, but practically unknown south of Kedah. The Malaysian form has been separated from the typical Indian race on account of a narrowing bare stripe down the sides of the neck. In some of our series, possibly younger birds, this region is covered with soft down.

99. *Pseudotantalus leucocephalus* (Penn.).

Tantalus leucocephalus, Pennant, Ind. Zool., 1769, p. 11, Pl. x (Ceylon); A., p. 484 (Tavoy and Pakchan).

Pseudotantalus leucocephalus, G., p. 152 (Ratburi and Petchaburi); H., p. 88 (Bandon); L., p. 91 (Ghirbi).

The Pelican Ibis, or Painted Stork, is fairly common in our area and extends south as far as Langkawi, south of which it is replaced by *P. lacteus*. It is common in rice fields, and roosts at night on their margins on the tops of very high trees.

100. *Anastomus oscitans* (Bodd.).

Ardia oscitans, Boddaert, Tabl. Pl. Enl., 1783, p. 55 (Pondicherry).

Anastomus oscitans, G., p. 30 (Ratburi); Williamson, Journ. N. H. Soc. Siam, iii, 1918, pp. 39, 40 (between Tachin and Bangkok, and Ta Rua, C. Siam).

The above records are the southernmost noted for the Shell-Ibis, or Open-bill as it is perhaps more correctly called.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

ARDEIDAE.

HERONS AND BITTERNS.

1	{ Tail feathers 12	2
	{ Tail feathers 10	12
2	{ Feathering on tibio-tarsus not extensive	3
	{ Feathering extending nearly to heel	8
3	{ Middle toe and claw longer than tarsus	<i>Pyrherodias purpurea manillensis.</i>
	{ Middle toe and claw shorter than tarsus	4
4	{ Edge of mandibles serrated	5
	{ Edge of mandibles not serrated	7
5	{ With ornamental plumes to head, no dorsal train	6
	{ With no ornamental plumes, a dorsal train	<i>Mesophoyx intermedia.</i>
6	{ Crown of head slate colour	<i>Ardea sumatrana.</i>
	{ Crown of head white	<i>Ardea cinerea jouyi.</i>
7	{ Bill (culmen) not, or only slightly, exceeding middle toe and claw; tarsus more than 5 inches	<i>Herodias alba.</i>
	{ Bill (culmen) much exceeding middle toe and claw; tarsus less than 4 inches	<i>Garzetta garzetta.</i>
8	{ Bill without serrations	9
	{ Bill with serrations	10
9	{ Culmen longer than tarsus	<i>Demigretta sacra.</i>
	{ Culmen about equal to tarsus	<i>Nycticorax nycticorax.</i>
	{ Culmen shorter than tarsus	<i>Gorsachius melanolophus.</i>
10	{ Bill longer than middle toe and claw; plumage with no white	<i>Butorides javanica.</i>
	{ Bill equal to middle toe and claw; plumage mainly white	11
	{ Bill shorter than middle toe and claw	<i>Bubulcus coromandus.</i>
11	{ Smaller, head and neck brownish	<i>Ardeola grayi.</i>
	{ Larger, head and neck blackish	<i>Ardeola bacchus.</i>
12	{ Middle toe and claw equal to tarsus	13
	{ Middle toe and claw exceeding tarsus	<i>Botaurus stellaris.</i>
13	{ Size larger, wing over 6 inches	<i>Dupetor flavicollis.</i>
	{ Size smaller, wing under 6 inches	14
14	{ Tarsus feathered to heel; primaries blackish	<i>Ardetta sinensis.</i>
	{ Tarsus not feathered to heel; primaries chestnut	<i>Ardetta cinnamomea.</i>

101. *Pyrherodias purpurea manillensis* Meyen.

Ardea purpurea, var. *manillensis*, Acta Acad. Leop-Carol. xvi, Suppl., p. 102.

Ardea purpurea, A., p. 472 (Tavoy).

Phoyx manillensis, D., p. 80 (Patelung).

Ardea manillensis, G., p. 152 (Ratburi and Petchaburi).

♂ ad. Mamoh, Pakchan, Peninsular Siam. 27 February, 1919. (No. 4295).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

"Iris chrome; orbits lemon yellow tinged with green; upper mandible brown edged with ochre yellow, lower ochraceous yellow, base greenish; thighs and tarsi yellow, tarsi and toes black in front."

Total length, 925; wing, 375; tail, 160; tarsus, 124; bill from gape, 145 mm.

Personally we have found the Purple Heron rarer in the Peninsula than it is in Sumatra: in the south, indeed, it is extremely uncommon.

102. *Ardea sumatrana* Raffles.

Ardea sumatrana, Raffles, Trans. Linn. Soc. xiii, 1822, p. 325 (Sumatra); A., p. 469 (Mergui to Pakchan); F., p. 14 (Terutau Id.); H., p. 142 (Koh Pennan).

Common in most places along the coast on mud-flats and in mangrove swamps, but very wary and hard to approach.

103. *Ardea cinerea jouyi* Clark.

Ardea cinerea jouyi, Clark, Proc. U. S. Nat. Mus., 32, 1907, p. 468 (Korea); I., p. 136 (Koh Lak).

Ardea cinerea, A., p. 472 (Pakchan); G., p. 152 (Ratburi and Petchaburi).

Probably fairly common in winter.

104. *Herodias alba* (Linn.).

Ardea alba, Linn., Syst. Nat. i, 1766, p. 239 (Europe).

Herodias torra, A., p. 472 (Crab Island, Tavoy Estuary).

Herodias alba, H., p. 89 (Bandon).

Local and rare.

105. *Mesophoyx intermedia* (Wagl.).

Ardea intermedia, Wagler, Ibis, 1829, p. 659.

Mesophoyx intermedia, I., p. 136 (Koh Lak).

Distinctly uncommon.

106. *Garzetta garzetta* (Linn.).

Ardea garzetta, Linn., Syst. Nat. i, 1766, p. 237 (Oriental Region).

Herodias garzetta, B., p. 84 (Junk Seylon); Williamson, Journ.

Nat. Hist. Soc. Siam, iii, pp. 40, 41 (Tachin and Bangkok, C. Siam, and Anghin and Bang Phra, Inner Gulf of Siam).

Garzetta garzetta, E., p. 117 (Patani).

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salunga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fascioli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Probably not uncommon in suitable localities, but, as remarked by Williamson, apt to be overlooked owing to its close resemblance to the ubiquitous *Bubulcus coromandus*.

107. *Demiegretta sacra* (Gm.).

Ardea sacra, Gmelin, Syst. Nat. i, 1788, p. 640.

Demiegretta sacra, L., p. 481 (Mergui); Sharpe, Cat. Birds Brit. Mus., xxvi, 1898, p. 143; E., p. 117 (Patani); F., p. 15, Malay Peninsula; H., p. 143 (Koh Samui and Koh Pennan); I., p., 137 (Koh Lak); L., p. 92 (Pulau Panjang).

♀. Koh Pipidon, Ghirbi Bay, W. Coast Siam. 5 February, 1919 (No. 3944).

"Iris chrome; tarsi black, toes mottled with yellow; bill blackish."

Total length, 630; wing, 278; tail, 104; tarsus 79; bill from gape 90 mm.

Common throughout the coasts of Malaya in suitable localities. Within our area a very large proportion of the birds are in the grey plumage, with a more or less extensive white streak on the throat.

Nycticorax nycticorax (Linn.).

Ardea nycticorax, Linn., Syst. Nat. i, 1788, p. 235.

Nycticorax griseus, Williamson, Journ. Nat. Hist. Soc. Siam, i, 1914, p. 48 (Bangkok).

Nycticorax nycticorax, Stuart Baker, Journ. Nat. Hist. Soc. Siam, iv, 1920, p. 42 (Hua Takhae, C. Siam).

The Night Heron will probably be found in Lower Siam, though it is not yet on record from our area.

108. *Gorsachius melanolophus* (Raffles).

Ardea melanolophus, A., p. 484 (neighbourhood of Pakchan); F., p. 15 (Trang); I., p. 137 (Koh Lak).

Not really uncommon within its area of distribution, but easily escaping notice owing to its nocturnal habits. Mr. W. J. F. Williamson informs us that he has found it breeding in heavy forest at Pak Jong, Eastern Siam, in June and August.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (second part).

(third part).

109. *Butorides javanica* (Horsf.).

Ardea javanica, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 190 (Java).

Butorides javanica, A., p. 483 (Tavoy to Bankasoon); B., p. 84 (Junk Seylon); E., p. 116 (Patani); F., p. 15 (Malay Peninsula) K., p. 86 (Tachin); L., p. 92 (Pulau Panjang).

♀. Tung Pran, Takuatung, W. Coast Siam. 15 February, 1919. (No. 4023).

"Iris yellow; orbits and face apple-green; upper mandible black, lower and feet greenish yellow."

Total length, 432; wing, 164; tail, 65; tarsus, 47; bill from gape, 75 mm.

110. *Ardeola grayi* (Sykes.)

Ardea grayii, Sykes, P. Z. S. 1832, p. 158 (Dekkan, India).

Ardeola grayi, A. p. 481 (Mergui to Pakchan); E., p. 116 (Patani); G., p. 152 (Rathuri and Petchaburi); L., p. 138 (Koh Lak); K., p. 86 (Tachin); L., p. 92 (Pulau Panjang).

♀. Renong river, Peninsular Siam. 21 February, 1919. (No. 4149).

"Iris orange; upper mandible black, lower yellow, tip black; orbits, etc., apple-green; feet pale apple-green."

Total length, 450; wing, 201; tail, 80; tarsus, 53; bill from gape, 76 mm.

Very common right up the Pakchan, in large flocks of forty or fifty individuals.

111. *Ardeola bacchus* (Bp.).

Buphus bacchus, Bonaparte, Consp. Av. ii, 1857, p. 127 (Malay Peninsula).

Ardeola prasinocelis, A., p. 481 (Choung-thanoung, S. Tenasserim); C. ii, p. 253 (S. Tenasserim); F., p. 15 (Trang); H., p. 143 (Koh Samui).

Rarer than the preceding, but the two forms are rather difficult to distinguish except in breeding plumage.

112. *Bubulcus coromandus* (Bodd.).

Caneroma coromanda, Boddaert, Tabl. Pl. Enl., 1783, p. 54.

Buphus coromandus, A., p. 481 (Tavoy, Pakchan).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. G. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Bubulcus coromandus, B., p. 84 (Junk Seylon); D., p. 80 (Patelung); E., p. 116 (Patani); F., p. 16 (Trang); G., p. 152 (Ratburi and Petchaburi); I., p. 139 (Koh Lak); K., p. 87 (Koh Lak).

Common everywhere in rice fields and in attendance on cattle.

113. *Ardetta sinensis* (Gm.).

Ardea sinensis, Gmelin, Syst. Nat. i, 1788, p. 642 (China).

Ardetta sinensis, A., p. 484 (Tavoy, Pakchan); B., p. 84 (Junk Seylon); H., p. 143 (Koh Pennan); I., p. 139 (Koh Lak).

Probably partially migrating and commonest in winter.

114. *Ardetta cinnamomea* (Gm.).

Ardea cinnamomea, Gmelin, Syst. Nat., i, 1788, p. 643 (China).

Ardetta cinnamomea, A., p. 483 (Tavoy to Pakchan); B., p. 84 (Junk Seylon); E., p. 116 (Patani); G., p. 152 (Ratburi and Petchaburi).

♀, imm. Tazan, Chumpon, Peninsular Siam. 24 March, 1919. (No. 4845).

"Iris yellow; bill pale yellow, tomia and base brown; feet greenish, soles yellow."

Total length, 370; wing, 143; tail, 45; tarsus, 52; bill from gape, 63 mm.

115. *Dupetor flavicollis* (Lath.).

Ardea flavicollis, Latham, Ind. Orn. ii, 1790, p. 701 (India).

Ardetta flavicollis, A., p. 483 (Bankasoon); B., p. 84 (Junk Seylon).

Rare wherever it occurs. It has been found breeding at Bangkok by Williamson.

Botaurus stellaris (Linn.).

Ardea stellaris, Linn., Syst. Nat. i, 1766, p. 239 (Europe).

In Siam only recorded from Raheng, in the north of C. Siam, *vide* Herbert, Journ. Nat. Hist. Soc. Siam, ii, 1916, p. 58. Two specimens are known from the Malay Peninsula, from Malacca and Singapore.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

ANSERIFORMES.

DUCKS AND GEES.

1	{ Wing over 7 inches	2
	{ Wing under 7 inches; bill short and high ..	<i>Nettopus coromandelianus.</i>
2	{ Wing under 9 inches	3
	{ Wing over 10 inches	4
3	{ With a speculum on the wing	<i>Querquedula querquedula.</i>
	{ With no speculum on the wing	<i>.. Dendrocygna javanica.</i>
4	{ Head buff or whitish, speckled with black ..	<i>Casarca casarca.</i>
	{ Head white, strongly speckled with black ..	5
5	{ Belly white	<i>Sarcidiornis melanonotus.</i>
	{ Belly brown or black	<i>Asarcornis scutulata leucoptera.</i>

116. *Sarcidiornis melanonotus* (Penn.).

Anser melanonotus, Pennant, Faunula Indica, 1769, p. 12, pl. xi (Ceylon).

Sarcidiornis melanonotus, Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 42 (Klong Luang Peng, nr. Bangkok.).

The only reference to the Comb Duck is that given above: elsewhere the nearest localities are the Attaran river, N. Tenasserim, and the vicinity of Chiangmai.

117. *Asarcornis scutulata leucoptera* (Blyth).

Sarcidiornis leucopterus, Blyth, Journ. Asiat. Soc. Bengal, xviii, 1849, p. 820 (Burma).

Anas leucoptera, C. ii, p. 281 (Tavoy and Mergui).

Asarcornis scutulata, D., p. 80 (Patelung).

Asarcornis leucoptera, F., p. 19 (Trang); H., p. 89 (Bandon); I., p. 134 (Hat Sanuk and Hue Sai near Koh Lak).

Asarcornis scutulata leucoptera, L., p. 92 (Ghirbi).

This heavy Wood-Duck is common in Peninsular Siam, where it feeds in the rice fields largely on species of snail (*Ampullaria*), and lies up for the night in the adjacent jungle. Our men met with it on a small stream near Hat Sanuk, but did not secure specimens.

118. *Nettopus coromandelianus* (Gm.).

Anas coromandeliana, Gmelin, Syst. Nat. i, 1788, p. 522 (Coromandel, India).

Nettopus coromandelianus, A., p. 486 (Tavoy); D., p. 81 (Patelung); G., p. 153 (Ratburi and Petchaburi).

Said to be common at the north end of the Talé Sap and in the Talé Noi in Patelung, but rare everywhere else in the Peninsula.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

119. *Dendrocyena javanica* (Horsf.).

Anas javanica, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 199 (Java).

Dendrocyena javanica, A., p. 486 (Tavoy); D., p. 81 (Patelung); F., p. 21 (Trang); G., 153 (Ratburi and Petchaburi); H., pp. 89, 143 (Bandon and Koh Samui); L., p. 93 (Ghirbi).

Common everywhere in the northern parts of the Peninsula.

***Casarca casarca* (Linn.).**

Anas casarca, Linn., Syst. Nat. iii, 1768, App., p. 224.

Casarca rutila, A., p. 489 (Kolan Id., south of Mergui).

Tadorna casarca, C. ii, p. 227.

This sheldrake may possibly occur in Lower Siam. It has been seen by Davison in the Mergui Archipelago, though there are no other records from Tenasserim.

120. *Querquedula querquedula* (Linn.).

Anas querquedula, Linn., Syst. Nat. i, 1766, p. 203 (Europe).

Querquedula querquedula, G., p. 153 (Ratburi and Petchaburi); L., p. 135 (Inner Gulf of Siam).

Met with at times in the marshes on the Perak river, but, like all ducks except the Wood-Duck and Tree-Teal, very rare in the Peninsula.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

STEGANOPODES.

DARTERS, CORMORANTS, PELICANS, ETC.

1	{ Tail deeply forked	2
	{ Tail rounded	3
2	{ Bill from gape 4.5 inches or over	<i>Fregata aquila.</i>
	{ Bill from gape 3.75 inches or under	<i>Fregata ariel.</i>
3	{ Middle tail-feathers not greatly elongate: nostrils not pervious	4
	{ Middle tail-feathers greatly elongate; nostrils pervious	<i>Phaethon indicus.</i>
4	{ Size very large; bill flattened	9
	{ Size smaller; bill compressed	5
5	{ With nostrils visible	6
	{ No external nostrils	<i>Sula sula</i>
6	{ Bill hooked	7
	{ Bill pointed	<i>Plotus melanogaster.</i>
7	{ Tail of 14 feathers	<i>Phalacrocorax carbo albiventer.</i>
	{ Tail of 12 feathers	8
8	{ Bill (culmen) less than 1.5 inches	<i>Phalacrocorax javanicus.</i>
	{ Bill (culmen) more than 2.2 inches	<i>Phalacrocorax fuscicollis.</i>
9	{ Feathering on forehead pointed	<i>Pelecanus roseus.</i>
	{ Feathering on forehead ending in a concave line	<i>Pelecanus philippinensis.</i>

121. *Fregata* ? *aquila* (Linn.).*Pelecanus aquilus*, Linn., Syst. Nat. i, 1766, p. 216 (Ascension Id.).*Fregata minor*, Hume, Stray Feathers, ix, 1880, p. 119 (Tongka; Takuapah; (Langkawi Ids.).*Fregata aquila*, B., p. 86 (Junk Seylon).? *Fregata andrewsi*, Mathews, Austral. Av. Rec. ii, 1914, p. 120, Christmas Id.); Gyldenstolpe, Ibis, 1920, p. 775.

We have frequently seen Frigate birds on both coasts of Siam, notably in Bandon Bight, but have not obtained specimens; the smaller species has been obtained in the vicinity of Pulau Tinggi, off the coast of Johore.

Fregata ariel (Gould).*Attagen ariel*, Gould in Gray's Gen. Birds, iii, 1869, p. 669 (Australia).*Fregata ariel ariel*, Rothschild, Nov. Zool., xxii, 1915, p. 145.

It is not profitable to discuss the names for Siamese birds in the absence of specimens, and we have therefore not attempted to assign to the exact races the two forms that almost certainly occur. Reference may be made to Lord Rothschild's article on the Genus,

A. Hume, & Davison, Stray Feathers, vi, 1878.
 B. Müller, Die Ornith. der Insel Salanga, 1882.
 C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
 D. Bonhote, P. Z. S. 1901, Vol. i

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
 F. Robinson and Kloss, Ibis, 1910-11.
 G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
 H. Robinson, Journ. F. M. S. Museums, v, 1915.

above quoted, but it may here be noted that the ♂ from Malacca (Davison coll.) in the British Museum, which he assigns to *F. aquila*, with a query as to the correctness of its provenance, is obviously the bird from Pulau Nongsa in Singapore Straits, described by Hume (Stray Feathers, ix, p. 119), under the name *Fregata minor* (Gm.).

122. *Phaethon indicus* Hume.

Phaethon indicus, Hume, Stray Feathers, iv, 1876 p. 481 (Mekran Coast); A., p. 493 (Victoria Point).

The only record for our area is the one noted by Davison from south of Victoria Point. There is a skin labelled "Straits of Malacca (Cantor)" in the British Museum, but we have never seen the bird in local waters.

123. *Sula sula* (Linn.).

Pelecanus sula, Linn., Syst. Nat. i, 1766, p. 218 (Indian Seas).

Sula australis, A., p. 493 (Coast of Peninsular Siam and Tenasserim).

Dysporus sula, C. ii, p. 229 (Coast of Tenasserim).

Sula sula, Williamson, Journ. Nat. Hist. Soc. Siam, ii, 191, p. 63 (Koh Rin); id. op. cit. iii, 1918, p. 38 (Koh Chuan).

Common on the western coast of Siam: we have not seen it on the east side, though we have been assured that it is found breeding in a small island off the coast of Nakon Sritamarat

Plotus melanogaster (Penn.).

Anhinga melanogaster, Pennant, Indian Zool., 1760, p. 53, pl. XV (Ceylon and Java); F., p. 19 (Langkawi Ids.).

This bird also must certainly occur in Lower Siam: two or three specimens used to live in the lake in Dayang Bunting, Langkawi Ids.

124. *Phalacrocorax carbo albiventer* (Tickell).

Carbo albiventer, Tickell, Journ. Asiat. Soc. Bengal, xi, 1842, p. 463 (Chaibassa, South Behar).

Phalacrocorax carbo, A., p. 496 (Tavoy); E., p. 115 (Patani); G., p. 153 (Ratburi and Petchaburi); H., p. 143 (Koh Pennan).

Phalacrocorax carbo indicus, Mathews, Birds of Australia, iv, 1915, p. 171 (India).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Quite common on the east coast of Siam but rare on the west. Tropical races are much smaller than European birds and the name *P. carbo albiventer* Tickell, probably applies.

125. *Phalacrocorax javanicus* (Horsf.).

Carbo javanicus, Horsf., Trans. Linn. Soc., xiii, 1822, p. 197 (Java).

Phalacrocorax pygmaeus, A., pp. 496, 521 (Tavoy); C. ii. p. 234 (Tenasserim).

Phalacrocorax javanicus, G., p. 153 (Ratburi and Petchaburi).

Phalacrocorax pygmaeus javanicus, I., p. 133 (Ratburi).

The Lesser Cormorant is not a marine species, but appears to occur on the upper reaches of many rivers in Siam and the Malay Peninsula. We have seen it in mountain streams in Bandon.

***Phalacrocorax fuscicollis* Steph.**

Phalacrocorax fuscicollis, Steph. in Shaw's Gen. Zool. xiii, 1826, pt. I, p. 91 (Bengal); A., p. 496 (Salween and Sittang); C. ii, p. 233; Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 39 (Klong Samrong, S. E. of Bangkok).

Though the Brown-necked Shag has not as yet been actually recorded from our area, it is almost certain to occur; it is therefore inserted in the key.

126. *Pelecanus philippensis* Gm.

Pelecanus philippensis, Gmelin, Syst. Nat., i, 1788, p. 571 (Philippine Ids.); A., p. 495 (Thatone). G., p. 152 (Ratburi and Petchaburi); Williamson, Journ. Nat. Hist. Soc. Siam, i, 1915, p. 219 (Singora).

***Pelecanus roseus* Gm.**

Pelecanus roseus, Gmelin, Syst. Nat. i, 1788, p. 570 (Luzon).

Pelicans are common in the Trang swamps, in the vicinity of the Talé Sap and Talé Noi in Patelung, and on the coast in Patani Bay, and on the Bandon Bight, but few specimens have, as far as we are aware, been obtained. This species, however, is certain to occur.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. .

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

TUBINARES.

PETRELS AND PUFFINS.

Tarsi covered in front with hexagonal scales; claws sharp; rump not white	<i>Oceanodroma monorhis</i>
Tarsi covered in front with transverse scutes; claws flat; rump white	<i>Oceanites oceanicus</i>

Oceanodroma monorhis (Swinh.).

Thalassidroma monorhis, Swinhoe, Ibis, 1867, p. 386 (Amoy); Van Oort, Notes Leyd. Mus., xxxiii, 1911, p. 111 (Semarang, Java).

There are three known specimens of this rare Petrel from Indo-Malayan waters; that from Java recorded above, a female obtained at Keppel Harbour, Singapore, by Mr. Koh Ah Wing, now in the Raffles Museum, and a male obtained in the One Fathom Bank Lighthouse, off the coast of Selangor, in the F. M. S. Museum. The species will probably be found on the Siamese coast also.

Oceanites oceanicus (Kuhl).

Procellaria oceanica, Kuhl, Beitr., p. 136, pl. x, fig. i. (1820).

Oceanites oceanicus, A., p. 490.

Davison records this species as seen off the Moscovs, a group of islets north of Tavoy, and we have on several occasions in stormy weather seen small black petrels with white rumps, in various parts of the Straits Settlements, so the species probably occurs off the Siamese coast.

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- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
J. Robinson, Journ. F. M. S. Mus. vii, 1917. Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
K. Kloss, Ibis, 1918. M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.



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THE BIRDS OF SOUTH-WEST AND PENINSULAR SIAM.

BY HERBERT C. ROBINSON, C.M.Z.S., M.B.O.U.,

AND

CECIL BODEN KLOSS, F.Z.S., M.B.O.U.

(Continued from page 87).

ACCIPITRIFORMES.

OSPREYS, HAWKS, EAGLES, KITES AND VULTURES.

1	{ No aftershaft to feathers	<i>Pandion haliaëtus cristatus.</i>	
	{ With an aftershaft to feathers .. .. .	.. .. .	2
2	{ Crown of head feathered .. .. .	.. .. .	3
	{ Crown of head naked .. .. .	.. .. .	36
	{ With a double notch to the upper mandible, .. .. .	.. .. .	4
3	{ With a single notch to the upper mandible .. .. .	.. .. .	5
	{ With no notch to the upper mandible .. .. .	.. .. .	8
4	{ Upper parts black; size smaller	<i>Baza loophotes burmana.</i>	
	{ Upper parts not black; size larger .. .. .	.. .. . <i>Baza jerdoni.</i>	
5	{ Size very small; wing under 5 inches	<i>Microhierax fringillarius.</i>	
	{ Size larger; wing over 6 inches .. .. .	.. .. .	6
6	{ Upper parts reddish brown	<i>Cerchneis tinnuncula saturata.</i>	
	{ Upper parts greyish or blackish .. .. .	.. .. .	7
7	{ Lower parts orange-brown; smaller .. .. .	.. .. . <i>Falco severus severus.</i>	
	{ Lower parts pinkish white; larger	<i>Falco peregrinus calidus.</i>	
8	{ Lores bristly .. .. .	.. .. .	11
	{ Lores feathered .. .. .	.. .. .	9
9	{ Bill thin, much compressed	<i>Machærampus alcinus</i>	
	{ Bill normal .. .. .	.. .. .	10
10	{ Crest in adults long	<i>Pernis ptilorhynchus ptilorhynchus.</i>	
	{ Crest in adults short or lacking	<i>Pernis ptilorhynchus ruficollis.</i>	
11	{ Tarsus feathered .. .. .	.. .. .	12
	{ Tarsus partially or entirely bare .. .. .	.. .. .	17

12	{ Claws much curved, hind claw longer than inner	13
	{ Claws straight, hind claw shorter than inner .. <i>Ictinaëtus malayensis.</i>	
13	{ Primaries exceeding secondaries by more than length of tarsus	14
	{ Primaries exceeding secondaries by less than length of tarsus	15
14	{ No elongate occipital crest <i>Aquila maculata.</i>	
	{ An elongate occipital crest <i>Lophotriorchis kieneri.</i>	
15	{ No elongate crest <i>Spizaëtus cirrhatu limnaëtus.</i>	
	{ An elongate crest	16
16	{ Larger; wing exceeding 16 inches <i>Spizaëtus nipalensis.</i>	
	{ Smaller; wing less than 14 inches <i>Spizaëtus alboniger.</i>	
17	{ Tarsi reticulated; scutellae broader than high	18
	{ Tarsi with some scutellae broader than high	22
18	{ Tarsi more than $\frac{1}{2}$ length of bill from gape	19
	{ Tarsi less than $\frac{1}{2}$ length of bill from gape <i>Elanus cæruleus cæruleus.</i>	
19	{ Scales in front of tarsus the same size as those behind	20
	{ Scales in front of tarsus larger than those behind <i>Butastur indicus.</i>	
20	{ Not crested <i>Circæëtus gallicus.</i>	
	{ Crested	21
21	{ Wing always exceeding 16 inches <i>Spilornis cheela rutherfordi.</i>	
	{ Wing never exceeding 16 inches <i>Spilornis cheela bassus.</i>	
22	{ Scales beneath toes rough and pointed	23
	{ Scales beneath toes not rough and pointed	25
23	{ Breast in adults grey; claws rounded beneath	24
	{ Breast in adults white; claws grooved beneath <i>Haliaëtus leucogaster.</i>	
24	{ Size large; wing exceeding 17 inches <i>Polioaëtus ichthyæëtus.</i>	
	{ Size small; wing less than 17 inches <i>Polioaëtus humilis humilis.</i>	
25	{ Size moderate; wing over 12 inches	26
	{ Size smaller; wing under 11 inches	31
26	{ Tarsus short	27
	{ Tarsus long	29
27	{ Tail rounded <i>Haliastur indus intermedius.</i>	
	{ Tail forked	28
28	{ Larger; a conspicuous white patch beneath wing <i>Milvus melanotis.</i>	
	{ Smaller; no conspicuous white patch beneath wing <i>Milvus migrans govinda.</i>	
29	{ Bill from cere to tip less than 0.75 inch <i>Circus melanoleucus.</i>	
	{ Bill from cere to tip more than 0.75 inch	30
30	{ Abdomen paler <i>Circus spilonotus.</i>	
	{ Abdomen darker <i>Circus æruginosus æruginosus.</i>	
31	{ Crested <i>Lophospizias trivirgatus rufitinctus.</i>	
	{ Not crested	32
32	{ Tarsus and toes thick; middle toe short	33
	{ Tarsus and toes slender; middle toe elongate	34
33	{ Upper parts pale grey, beneath banded in adults; larger <i>Astur badius poliopsis.</i>	
	{ Upper parts dark blackish grey, beneath uniform in adults; smaller <i>Astur soloënsis.</i>	

- 34 { Sexes nearly alike, always striped and barred beneath 35
 { Sexes different, adult male nearly uniform beneath *Accipiter gularis*.
- 35 { Very dark above; wing 10 inches or over *Accipiter nisus*, subsp.
 { Lighter above; wing under 10 inches *Accipiter affinis*.
- 36 { Tail feathers 14 *Gyps indicus tenuirostris*.
 { Tail feathers 12 37
- 37 { Nostrils round; bare parts red; a neck wattle *Otogyps calvus*.
 { Nostrils a slit; bare parts greyish brown; no neck wattle *Pseudogyps bengalensis*.

127. *Pandion haliaetus cristatus* (Vieill.).

Falco haliaetus, Linn., Syst. Nat. i, 1766, p. 129 (Europe).

Buteo cristatus, Vieill., Nouv. Dict. d'Hist. Nat. iv, 1816, p. 481
 (New Holland).

Pandion haliaetus, A., p. 16 (Pakchan); C. ii, p. 221 (S.
 Tenasserim); F., p. 29 (Kedah).

Pandion haliaetus cristatus, L., p. 123 (Koh Lak).

Sparsely distributed on all coasts. There is not sufficient material extant to be certain whether the Siamese bird is to be referred to the typical or to the Australian race (*P. h. cristatus*). Not improbably both forms occur, but the differences are trivial. For the present we accept Gyldenstolpe's identification.

128. *Baza lophotes burmana* Selater.

Falco lophotes, Temm., Pl. Col., 1824, pl. 10 (Pondicherry).

Baza lophotes, A., p. 24 (Malewoon, etc.); B., p. 77 (Junk Seylon);
 F., p. 25 (Trang); G., p. 151 (Ratburi and Petchaburi); L.,
 p. 94 (Junk Seylon, Pulau Pangang Ghirbi).

Baza lophotes burmana, Sclat., Bull. B. O. C. xli, 1920, p. 31
 (Malewoon).

♀. Tung Pran, Takuatung, W. Coast Siam. 14 February, 1919.
 (No. 3999).

♀. Koh Pra Tung, Takuapah, W. Coast Siam. 18 February, 1919.
 (No. 4104).

♂. Victoria Point, S. Tenasserim. 24 February, 1919. (No. 4187).

♂. Namchuk, Pakchan, Peninsular Siam. 26 February, 1919.
 (No. 4254).

♂. Tapli, Pakchan, Peninsular Siam. 6 March, 1919. (No. 4444).
 "Iris dark; bill and feet pale slate."

Total length, ♂ 308, 315, 320, ♀ 315, 310; wing, ♂ 236, 247,

235, ♀ 236, 227; tail, ♂ 150, 146, 145, ♀ 150, 140; tarsus, ♂ 27, 27, ♀ 29, 24; bill from gape, ♂ 25, 25, 24, ♀ 25, 24 mm.

Lower Siam seems to be the headquarters of this Cuckoo-Falcon; elsewhere in the Peninsula it is a rare winter visitor. Selater's characters hold good in the large majority of our considerable series so far as the absence of chestnut from the scapulars is concerned, though one specimen from an island in Ghirbi Bay has this colour very pronounced. As regards the colour of the band posterior to the white breast, some birds have it black, a few almost pure chestnut, while in the majority it is mixed.

129. *Baza jerdoni* (Blyth).

Lophastur jerdoni, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 464 (Malacca).

Baza sumatrensis, A., p. 25 (Pakchan); C. ii, p. 209 (S. Tenasserim).

Baza jerdoni, F., p. 25 (Trang and Langkawi Ids.); M. 1, p. 30 (S.E. and Central Siam).

We have dealt with this Cuckoo-Falcon fairly fully in a former paper (Ibis 1911, p. 25); no additional specimens have since been obtained in our area.

130. *Microhierax fringillarius* (Drap.).

Falco fringillarius, Drap., Dict. Class. d'Hist. Nat., vi, 1824, p. 412, pl. v. (Sumatra).

Microhierax fringillarius, A., p. 5 (Laynah to Bankasoon); B., p. 77 (Junk Seylon); E., p. 113 (Patani); F., p. 24 (Malay Peninsula); G., p. 151 (Ratburi and Petchaburi); H., p. 90 (Bandon).

One of the commonest Accipitrine birds in the present area.

131. (?) *Cerchneis tinnuncula saturata* (Blyth).

Tinnunculus saturatus, Blyth, Journ. Asiat. Soc. Bengal, xxviii, 1859, p. 277 (Moulmein).

Tinnunculus alaudarius, C. ii, p. 217 (Malewoon).

Cerchneis tinnunculus, F., p. 29 (Trang and Langkawi).

Falco tinnunculus saturata, I., p. 131 (Koh Lak).

Cerchneis tinnuncula dorriesi, Swann, Synopt. List Accipitres, iv, 1920, p. 146 (Siberia, wintering in India, Ceylon, Burma).

? *Falco interstinctus*, McClelland, P. Z. S., 1839, p. 154 (Assam).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♀. ad. Koh Lak, S. W. Siam. 6 April, 1919. (No. 5120).

"Iris dark brown; bill grey, black at tip, cere yellow; feet yellow."

Total length 365; wing 260; tail 185; tarsus 445; bill from gape 23 mm.

An immature female from Langkawi, shot in November, has the wing 245 mm.

It is impossible to say whether these specimens are really representatives of the resident tropical race, or migrants, as the material is insufficient. From the date, the Langkawi bird is probably true *C. t. tinnunculus*, or the form recently described by Swann, and that from Koh Lak, *T. t. saturatus*. Both birds, however, agree with Swann's race in their rather long tails. Colour affords no help, as both are in very worn and faded plumage.

Mr. Williamson obtained a female at Koh Lak on Dec. 28, 1921 also in worn plumage but rather pale. Total length 340 (in flesh), wing 247, tail 193 mm.

Inglis notes that the Kestrel breeds in Cachar, and it is therefore quite possible that *Falco interstinctus* McClelland (P. Z. S., 1839, p. 154), from Assam, is the name really applicable.

132. *Falco severus severus* Horsf.

Falco severus, Horsfield, Trans. Linn. Soc. xiii, 1822, p. 135 (Java);

Williamson, Journ. Nat. Hist. Soc. Siam, i, 1915, p. 198 (Bangkok).

Falco sp., I., p. 131 (Koh Lak).

Falco severus has been obtained near Bangkok by Williamson and we have examined the specimen therefrom. Gyldenstolpe doubtfully identifies a bird from the cliffs near Koh Lak with this species, and we have it from Cochin-China, so it will probably be found in Peninsular Siam.

Falco peregrinus calidus Lath.

Falco calidus, Latham, Ind. Orn. i, 1790, p. 41 (India)

Falco peregrinus, Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 30 (Bangkok).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

A not infrequent winter visitor to the Malay Peninsula and N. E. Sumatra, and certain to be found in South-west and Peninsular Siam.

133. *Machærhamphus alcinus* Western.

Machærhamphus alcinus, Western, Bijdr. t. d. Dierk. i, 1848, p. 29, pl. 12 (Malacca); A., p. 24 (Malewoon); C. ii., p. 206 (Malewoon); H., p. 90 (Bandon).

This Bat-Hawk, which is of crepuscular habits, will certainly be found to occur in the vicinity of most of the limestone hills that are so common in Lower Siam. The bird we obtained in Bandon was breeding on a lofty tree on the banks of the Bandon river.

134. *Pernis ptilorhynchus ptilorhynchus* (Temm.).

Buteo cristatus, Cuv., Vieill. Tabl. Enc. Meth. Orn., March 1823, p. 1225 (Java), (nec *Buteo cristatus*, Nouv. Dict. iv, 1816, p. 481).

Falco ptilorhynchus, Temm, Pl. Col. p. 44, July 1823 (Java and Sumatra).

Pernis brachypterus, Blyth, Journ. Asiat. Soc. Bengal, xxi, 1852, p. 436 (Megui?).

Pernis ptilorhynchus, C. ii, p. 207 (Tenasserim).

Pernis cristatus, F., p. 29 (Malay Peninsula); L., p. 130 (Koh Lak).

♂ imm. Tapli, Pakchan, Peninsular Siam. 8 March, 1919. (No. 4492).

“Iris dark hazel; bill black, base of lower mandible pinkish horn; feet pale yellow”.

Total length 635; wing (in moult) 432; tail, 283; tarsus 56; bill from gape 43 mm.

The question of the species or races of Honey Buzzards in the Oriental region has never been seriously tackled, and the extreme variability makes the allocation of specimens a very difficult one. It appears to be an established fact that birds from India (except southern India), west of the Bay of Bengal, never have a marked and distinct occipital crest. They cannot therefore be assigned to *P. cristatus* (Cuv.) of Java, which has slight priority over *P. ptilor-*

A. Hume, & Davison, Stray Feathers, vi, 1878. E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.
 B. Müller, Die Ornith. der Insel Salanga, 1882. F. Robinson and Kloss, *Ibis*, 1910-11.
 C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883. G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
 D. Bonhote, P. Z. S. 1901, Vol. i. H. Robinson, Journ. F. M. S. Museums, v, 1915.

hynchus Temm. (Java and Sumatra)*; the former was a uniform black bird, without a crest, but crested birds, also mainly black, are stated to occur in Java. We have examined about 20 birds from Sumatra, Borneo and the Malay Peninsula, which all have grey or black lores, and a lengthened occipital crest, but which vary in colour beneath, from an almost uniform white, through an almost uniform buffy brown, to birds barred and striped below with clear black and white, the black predominating. These birds agree exactly with descriptions and figures of *P. tweeddalii* Hume (Malay (Peninsula), which we cannot but regard as other than the very adult of *P. ptilorhynchus*. We have also two birds of a uniform brownish black, with no very lengthened crest, agreeing with the description and figures of *P. ptilorhynchus*, which we regard as a dimorphic form analogous with the case of *Sp. horsfieldi* and *Sp. caligatus*—forms of *Sp. limnaetus*.

On the strength of its lengthened crest the South Indian bird is probably entitled to sub-specific distinction as *P. c. ellioti*, but we have not examined specimens.

Immature birds of the non-crested Indian race appear to visit Siam and the Malay Peninsula in the winter months, and we possess specimens from Pulau Jemor, in the Straits of Malacca, and Kuala Lumpur. The name for the Continental and Northern Indian bird is *P. pt. ruficollis* (Less.).

135. *Ictinaetus malayensis*.

Falco malayensis, Reinw., Temm. Pl. Col. 1824, pl. 117 (Java and Sumatra, and Malay Archipelago).

Aquila pernigra, Hodgs., Journ. Asiat. Soc. Bengal, v, 1836, p. 227 (Central and Northern Nepal).

Ictinaetus malayensis, F., p. 22 (Trang).

*Nevertheless the name cannot be used, as *Buteo cristatus* had previously been applied to an Australian Osprey.

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. |
| 56, No. 2, 1916. | (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. |
| K. Kloss, Ibis, 1918. | (second part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. |
| | (third part). |

A strictly forest eagle, widely distributed but hard to procure. Swann (Synopt. List Accipitres, Part ii, 1919, p. 69) has revived Hodgson's name of *perniger* for the continental race. At the moment we have no Siamese or Malayan specimens available, but a male from Java, the type locality of *I. malayensis*, has the wing over 22 inches, which is more than Swann gives for *perniger*. The continental subspecies is, therefore, of rather dubious validity.

136. *Aquila maculata* (Gm.).

Falco maculatus, Gmelin, Syst. Nat. i, 1788, p. 258 (?).

Aquila clanga, C. ii, p. 186 (Tenasserim).

Aquila maculata, L., p. 125 (Koh Lak); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918 p. 27 (Bangkok).

We have seen no specimens of this eagle.

137. *Lophotriorchis kieneri* (Sparre).

Astur kieneri, Sparre, Mag. Zool. 1835, Aves, pl. 35. (E. Himalayas).

Lophotriorchis kieneri, G., p. 151 (Ratburi and Petchaburi).

Very rare everywhere; we have never seen a specimen in the flesh; the F. M. S. Museums possess an adult and an immature from near Kuala Lumpur, and we have examined an immature bird from the highlands of Sumatra.

138. *Spizaetus cirrhatus limnaetus* Horsf.

Falco limnaetus, Trans. Linn. Soc. xiii. 1821, p. 138 (Java).

Spizaetus limnaetus, A., p. ii (Bankasoon); E., p. 114 (Patani); F., p. 23 (Trang); H., p. 144 (Koh Pennan); L., p. 127 (Koh Lak); L., p. 93 (Ghirbi and Junk Seylon).

♀. Kandhuli, Chaiya, Peninsular Siam. 21 September, 1919. E. Seimund (C.).

A fully adult bird, in the striped plumage, wing 415 mm. Commoner, and frequenting more open country, than the other species of the genus.

139. *Spizaetus nipalensis*.

Nisaetus nipalensis, Hodgson, Journ. Asiat. Soc. Bengal, v, 1836, p. 229, pl. 7 (Nepal).

Spizaetus nipalensis, F., p. 22 (Terutau).

Spizaetus nipalensis nipalensis, L., p. 126 (Hue Sai, S. W. Siam).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♀. ad. Tapli, Pakchan, Peninsular Siam. 3 March, 1919.
(No. 4399).

"Iris orange; bill black, base grey; feet pale yellow".

Total length 715; wing 438; tail 305; tarsus 105; bill from gape 50 mm.

This bird, shot in heavy jungle, is fairly adult, with the bars on the breast well developed and a crest of 100 mm. The bird from Terutau is immature and is entirely immaculate beneath.

W. L. Slater (Bull. Brit. Orn. Club, xl, 1919, p. 37) has recently described Southern Chinese birds, *Sp. n. fokiensis*, as smaller than the Himalayan form (wing, ♂ 419—425, ♀ 445 mm.), against an average, in the Himalayan typical specimens, of ♂ 450, ♀ 485 mm., and in all cases lacking the long crest feathers. Our specimen, above, apparently agrees in size with the Chinese bird, but has the crest-feathers fully developed. We do not care to establish yet a third race on a single adult specimen. Swann, however, (Synopsis Accipitres, 2nd ed., part ii, Jan. 1922, p. 119, note), records the fact that Chinese and Hainan birds have the long crest feathers when fully adult.

140. *Spizaetus alboniger* (Blyth).

Nisaetus alboniger, Blyth, Journ. Asiatic Soc. Bengal, xiv, 1845, p. 173 (Malacca).

Spizaetus alboniger, A., p. 12 (Bankasoon); C. ii, p. 191 (Mergui and Bankasoon); M. I, p. 28 (Tung Song, Peninsular Siam).

This Harpy Eagle has only been recorded once from any part of Siam; we possess specimens from various parts of Perak. The bird frequents hilly regions covered with dense forest and is, therefore, very difficult to procure, though not really rare.

Elanus caeruleus caeruleus (Desf.).

Falco caeruleus, Desf., Mem. Acad. Sc., 1787, p. 503, pl. 15 (Algeria).

Elanus caeruleus caeruleus, I., p. 129 (Neighbourhood of Bangkok).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

We have specimens of this kite from Taiping, procured in August and October, and from Kuala Lumpur, in November, where it is a winter migrant: though not recorded from Southern Tenasserim, or from Peninsular Siam, it will almost certainly be found there.

Mr. W. J. F. Williamson informs us that this bird breeds near Bangkok, and is not a mere winter visitor, as surmised by Gyldestolpe.

141. *Butastur indicus* (Gm.).

Falco indicus, Gmelin, Syst. Nat. i, 1788, p. 264 (Java).

Butastur indicus, A., p. 19 (Tavoy to Pakchan); C. ii, p. 197 (Malewoon); F., p. 23 (Langkawi Ids.); L., p. 93 (Ghirbi); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 28 (Bangkok).

♂ ad. Namchuk, Pakchan, Peninsular Siam. 25 February, 1919. (No. 4209).

"Iris chrome; bill, anterior half black, basal half pale yellow; feet pale yellow".

Total length 410; wing 318; tail 195; tarsus 53; bill from gape 34 mm.

We have specimens from as far south as Perlis, but the bird is everywhere rare and probably only a winter visitor.

Mr. Williamson's collection includes a fine male from Naihoot, Langsuen shot on 31st October, 1921.

"Iris deep yellow, bill black, feet deep yellow."

Total length 415, wing (dry) 298, tail 189 mm.

142. *Circaetus gallicus* (Gm.).

Falco gallicus, Gmelin, Syst. Nat. i, 1788, p. 259 (France).

Circaetus hypoleucus, L., p. 127 (Koh Lak).

This species, also, we have never seen from Siam though it has been obtained in Selangor (*vide* Butler), but the specimen is no longer in existence.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Gates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

143. *Spilornis cheela bassus* (Forst.).

Falco bassus, Forst., Naturgesch. African Vog. 1798, p. 55 (Java).

Spilornis rutherfordi, A., p. 14 (*partim*, Pakchan); C. ii, p. 194 (*partim*, Tenasserim).

Spilornis cheela, D., p. 57 (Patelung and Patani).

Spilornis bacha, E., p. 114 (Patani).

Spilornis pallidus, F., p. 23 (Malay Peninsula); H., pp. 90, 144 (Bandon and Koh Samui).

? *Spilornis cheela rutherfordi*, M. 1, p. 28 (Tung Song, Peninsular Siam).

♂. Namehuk, Pakchan, Peninsular Siam. 25 February, 1919.
(No. 4208).

"Iris chrome; bill slate; feet dirty wax-yellow."

Total length 613; wing 389; tail 275; tarsus 90; bill from gape 44 mm.

After a careful comparison of large series of these Serpent-Eagles from Siam, Cochin-China, the whole of the Malay Peninsula, Java, Borneo and Sumatra, we are bound to state that we are now unable to recognize with certainty more than two forms, which are only separable on size, *viz.*, a large Indo-Chinese form of which the southern limit will be Koh Lak, to which the name *S. c. rutherfordi* has been given, and a smaller Malaysian bird to which, as Richmond shows (Proc. U. S. Nat. Mus., 35, 1909, p. 592, note) the name *Falco bassus* Forst., applies. In the Malayan area darker coloured as well lighter birds are found, more or less in the same locality, and to the former the name *S. bido* Horsf., from Java, applies. Javanese birds, however, can be matched with others from Sumatra and the Malay Peninsula, and Bornean birds (*S. pallidus* Walden) with skins from the Malay Peninsula and Sumatra. *Spilornis raja* Sharpe, from Borneo, is only the quite immature stage.

All the Oriental species, with the exception of the Philippine and Celebesian forms, are certainly subspecies, and the mainland races in physical contact exhibit very obvious gradation. The small Andaman and Nicobar birds are merely depauperated island forms.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.
(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.
(third part).

144. *Haliaetus leucogaster* (Gm.).

Falco leucogaster, Gmelin, Syst. Nat. i, 1788, p. 257 (New South Wales, Mathews).

Haliaetus leucogaster, A., p. 17 (Mergui, Malewoon); F., p. 23 (Malay Peninsula); H., p. 144 (Koh Samui and Koh Pennan); L., p. 128 (Koh Lak).

Cuncuma leucogaster, B., p. 76 (Junk Seylon).

Haliaetus leucocoryphus, F., p. 25 (Langkawi Ids.).

Common along the sea-coast everywhere.

Re-examination of the two specimens from Langkawi, formerly identified by us as *H. leucocoryphus*, convinces us that they are large immature specimens of this species. We have also examined the specimens on which rest the record of *H. leucocoryphus* from Borneo, and do not consider them also to be other than this species.

145. *Polioaetus ichthyaetus* (Horsf.).

Falco ichthyaetus, Horsf., Trans. Linn. Soc., xiii, 1821, p. 136 (Java).

Polioaetus ichthyaetus, A., p. 16 (Pakchan); E., p. 113 (Patani); F., p. 30 (Malay Peninsula); G., p. 151 (Ratburi and Petchaburi); H., p. 144 (Bandon); L., p. 94 (Junk Seylon and Ghirbi); Hume, Stray Feathers, ix, 1880, p. 120 (Panguga).

Our experience of this species is that it is never found in heavy jungle, but is fairly common on the sea coast and on rice fields.

146. *Polioaetus humilis humilis* (Müll. & Schleg.).

Falco humilis, Müll. & Schleg., Verhandelungen, Aves, 1839-44, p. 47, pl. 6 (Sumatra).

Polioaetus humilis, H., p. 90 (Bandon).

More of a jungle bird than the preceding. Peninsular Siam birds are probably to be referred to the Malayan race, *P. humilis*, rather than to the much larger bird from continental India and the Himalayas, *P. h. plumbeus* (Hodgs.).

147. *Haliastur indus intermedius* Gurney.

Haliastur indus intermedius, Gurney, Ibis, 1865, p. 28 (Java).

Haliastur indus, A., p. 22 (Mergui, Bankasoon); B., p. 76 (Junk Seylon); C. ii. p. 201 (Tenasserim); D., p. 58 (Patchung and Patani); G., p. 151 (Ratburi and Petchaburi).

A. Hume & Davison, Stray Feathers, vi, 1879.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Haliastur intermedius, E., p. 114 (Patani); F., p. 24 (Malay Peninsula); H., p. 144 (Bandon Ids.); I., p. 129 (Koh Lak); L., p. 93 (Ghirbi).

Imm. Renong river, Peninsular Siam. 22 February, 1919. (No. 4167).

"Iris brown; bill and cere greenish lead; feet dirty yellowish grey."

The Brahminy Kite is common everywhere on the coasts, extending some distance inland over the rice fields.

We cannot agree with Selater (*vide* Baker, Journ. Nat. Hist. Soc. Siam, iv, 1920, p. 29) that *Haliastur indus intermedius* is confined to the Indo-Malayan Islands. Birds from the Malay Peninsula, nearly to Bangkok, are certainly nearer to this form, though in Central and Eastern Siam some approach is shown to the typical Indian race, *H. i. indus*.

148. *Milvus melanotis* (Temm. & Schleg.).

Milvus melanotis, Temm. & Schleg., Faun. Japon., 1845-50, p. 14. pls. v, v b; G., p. 151 (Ratburi and Petchaburi).

Milvus lineatus, Gray in Hardw. Ill. Ind. Zool., i, 1832, p. i. pl. 18 (China); I., p. 129 (Bangkok).

Mr. Williamson's collection includes a female from Koh Lak shot on December 26, 1921.

"Iris dark brown; bill dark horn, gape light bluish-grey, cere dirty white; legs pale bluish-white, claws dark horn".

Total length 664 (flesh); wing 493; tail, 295 mm.

149. *Milvus migrans govinda* Sykes.

Milvus govinda, Sykes, P. Z. S. 1832, p. 81 (Dekkan, India); G., p. 151 (Ratburi and Petchaburi).

Milvus affinis, A., p. 23 (Tavoy, Mergui); C. ii, p. 202 (Tenasserim). *Milvus migrans govinda*, Gyldenstolpe, Ibis, 1920, p. 746 (Bangkok and neighbourhood).

A very rare visitor to the Malay Peninsula; we have a single specimen from near Taiping, Perak, shot in November 1910.

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| <p>I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.</p> <p>J. Robinson, Journ. F. M. S. Mus. vii, 1917.</p> <p>K. Kloss, Ibis, 1918.</p> <p>L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.</p> | <p>M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).</p> <p>Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).</p> <p>M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).</p> |
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150. *Circus melanoleucus* (Forst.).

Falco melanoleucus, Forster, Ind. Zool. 1781, p. 12, pl. ii.

Circus melanoleucus, A., p. 21 (Tavoy, Malewoon, and Tongka); B., p. 78 (Junk Seylon).

♂ ad. ♀ imm. Namchuk, Pakchan, Peninsular Siam. 24-25 February, 1919. (Nos. 4202, 4230).

"*Male*. Iris and feet chrome; bill black." *Female*. Iris lemon; bill slate, cere and base yellowish green; feet pale yellow.

Total length, ♂ 442, ♀ 463; wing, ♂ 352, ♀ 364; tail, ♂ 217, ♀ 240; tarsus, ♂ 67, ♀ 80; bill from gape, ♂ 28, ♀ 32, mm.

This beautiful Harrier is a rare winter visitor to the southern parts of the Malay Peninsula as far south as Johore; Mr. Seimund has obtained several specimens in the swampy plains near Kuala Lumpur. It is common in Peninsular and S. W. Siam whence we have seen many specimens.

Circus spilonotus Kaup.

Circus spilonotus, Kaup in Jardine's Contr. Ornith. 1850, p. 59 (Asia); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 29 (Bangkok, and Tachin river mouth).

Occurs in small numbers in the Malay Peninsula, but often confused with the preceding.

151. *Circus æruginosus æruginosus* (Linn.).

Falco æruginosus, Linn. Syst. Nat. i, 1766, p. 130 (Europe).

Circus æruginosus, A., p. 22 (Pakchan); B., p. 78 (Junk Seylon); F., p. 21 (Langkawi Ids.); I., p. 124 (Koh Lak).

2♂, ♀, Namchuk, Pakchan, Peninsular Siam. 25-26 February, 1919. (Nos. 4231, 4232, 4253).

"*Male*. Iris lemon; bill slate, cere and base yellowish green; feet pale yellow. *Female*. Iris yellow; bill black, cere and base greenish slate; feet dirty yellowish."

Total length, ♂ 510, 535, ♀ 521; wing, ♂ 395, 403, ♀ 400; tail, ♂ 243, 250, ♀ 235; tarsus, ♂ 85, 85, ♀ 88; bill from gape, ♂ 40, 38, ♀, 32 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

The Marsh Harrier was common on the rice fields bordering the upper reaches of the Pakchan Estuary; we did not meet with it elsewhere. In the winter, in suitable open spaces, it is fairly abundant as far south as Kuala Lumpur.

152. *Lophospizias trivirgatus rufitinctus* (McClell.).

Astur trivirgatus, Temm., Pl. Col. 1824, pl. 303 (Sumatra).

Spizaetus rufitinctus, McClelland, P. Z. S. 1839, p. 153 (Assam).

Lophospiza rufitinctus, A., p. 7 (Bankasoon).

Astur rufitinctus, Hume, Stray Feathers, viii, 1879, p. 152 (Kos-soom).

Lophospizias trivirgatus, H., p. 90 (Bandon); L., p. 93 (Junk Seylon).

♂, ♀ ad. Tasan, Chumpon, Peninsular Siam. 13-14 March, 1919. (Nos. 4566, 4587).

"Iris, male chrome, female orange; bill slate, tip black, cere and gape yellow; feet, male bright yellow, female pale yellow".

Total length, ♂ 413, ♀ 455; wing, ♂ 221, ♀ 252; tail, ♂ 193, ♀ 210; tarsus, ♂ 62, ♀ 62; bill from gape, ♂ 29 ♀ 31 mm.

The northern race of the Crested Goshawk differs from the typical Sumatra bird in its larger size and in having the breast of the male duller, less reddish. The wings of two nearly adult Sumatran birds measure 198 and 216 mm.; the second, though sexed male, is probably a female. A nearly adult male from Temengoh, N. Perak, is 202 mm., and a male from Bandon 227 mm.

The sexes are nearly similar in colour, but males appear to have the dark marks on the breast and belly paler than in the females.

153. *Astur badius poliopsis* (Hume).

Micronisus poliopsis, Hume, Stray Feathers, ii, 1874, p. 325 (North Pegu); B., p. 78 (Junk Seylon).

Astur poliopsis, A., p. 7 (Pakchan); F., p. 22 (Trang).

Astur badius poliopsis, I., p. 24 (Koh Lak); K., p. 87 (Koh Lak);

L. p. 93 (Junk Seylon and Pulau Panjang).

Common in open country, rare towards the Malayan border.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

154. (?) *Astur soloensis* (Horsf.).

Falco soloensis, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 137 (Java).

Astur soloensis, A., p. 8 (Malewoon and Mergui); F., p. 22 (Langkawi Ids.).

Apparently not common, very likely often confused with *Accipiter gularis*.

Sharpe (Cat. Birds Brit. Mus.) and Swann* (Synopt. List Accipitr. i, p. 25, 1920) are inclined to keep separate *A. soloensis* and *A. cuculoides* (Temm., Pl. Col. 1823, pl. 129). For the present, however, we are disposed to regard the latter, with its uniform tail, merely as the very adult bird. Both were originally described from Java, *A. soloensis* from Central, and *A. cuculoides* from Western, Java.

155. *Accipiter gularis* (Temm. & Schleg.).

Astur gularis, Temm. & Schleg., Faun. Jap. Aves, 1845-50, p. 5, pl. 2.

Accipiter gularis, Ogilvie Grant, Ibis, 1896, p. 104; Hartert, Nov. Zool., xvii, 1910, p. 211.

2 ♂ ad, 1 ♂, imm. Kandhuli, Chaiya, Peninsular Siam. 13-22 September, 1919. (E. Seimund collector).

The wings of these are:—ad. 172-168; imm. 159 mm.

The possession of specimens of the typical *A. virgatus* from Java, and others agreeing with it from Sumatra, enables us to state with some degree of confidence that the typical form of that species is not likely to occur on the continent of Asia, if *A. v. besra*, from Southern India and Ceylon, is maintained as distinct. Adult females of *A. virgatus* and *A. gularis* are totally distinct, but the males (if it is true that the form described as *A. rufotibialis* from Kina Balu, N. Borneo, is merely the adult of *A. virgatus*) approximate, except in size, the insular bird being much the smallest. It is, therefore

*This author has, however, sunk *A. cuculoides* as a synonym in the 2nd edition of the above quoted work (Part i, 1921, p. 41).

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

doubtful if there is any *resident* form of the genus in the Malay Peninsula proper or in Peninsular Siam.

156. *Accipiter affinis* Hodgs.

Accipiter affinis, Hodgson in Gray's Zool. Misc. 1844, p. 81;
Gurney, List Diurnal Birds of Prey, pp. 39, 168-173 (Himalayas);
Hartert, Nov. Zool. xvii, 1910, p. 211.

♀ ad. Hat Sanuk, nr. Koh Lak, S. W. Siam. 14 April, 1919.
(No. 5302).

"Iris rich chrome; bill slate, culmen and tip black, cere greenish; feet yellow."

Total length 358; wing 202; tail 176; tarsus 61; bill from gape 23 mm.

This is the only definite record of an adult bird from the Malay Peninsula or from Peninsular Siam, but it is difficult to accumulate satisfactory material as the immense majority of birds visiting us on passage are quite immature and are referable to *A. gularis*. The present bird, when adult, is a close mimic of *Lophospizias trivirgatus rufitinctus*, from which it can be distinguished by the slender toes and the absence of the crest.

Accipiter nisus, subsp.

Accipiter nisus, subsp., Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 22 (Bangkok).

A subspecies of the European Sparrow Hawk occurs in Siam and probably just reaches our area, and there is one specimen, without precise location, in the F. M. S. Museums. The size of Williamson's specimens is rather large (wing 242, 252) and, according to Hartert (Vog. Palaarkt. Faun. ii, 1914, p. 1155), they would be referable to *A. nisus nisosimilis* Tickell (Journ. Asiat. Soc. Bengal, ii, 1833, p. 571, Borabhum).

Gyps indicus tenuirostris Hodgs.

Gyps tenuirostris, Hodgson in Gray's Gen. Birds, i, 1844, p. 6 (Nepal); Hume, Stray Feathers, vii, 1878, p. 326 (Nepal); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 26 (Bangkok).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

We have also a specimen from near Taiping, Perak. It may, therefore, occur in South-West and Peninsular Siam.

157. *Otogyps calvus* (Scop.).

Vultur calvus, Scop., Del. Flor. et. Faun. Insubr., ii, 1766, p. 85 (Pondicherry).

Otogyps calvus, A., p. i (Pakchan); E., p. 115 (Patani); G., p. 151 (Ratburi and Petchaburi); I., p. 132 (Koh Lak)

As the succeeding species, and associating with it, but rather rarer.

158. *Pseudogyps bengalensis* (Gm.).

Vultur bengalensis, Gmelin, Syst. Nat. i, 1788, p. 245 (Bengal).

Pseudogyps bengalensis, A., p. (Tenasserim); B., p. 78 (Junk Seylon); E., p. 115 (Patani); G., p. 151 (Ratburi and Petchaburi); I., p. 131 (General); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 27 (Bangkok).

Common everywhere; not extending south of Taiping, in the Malay Peninsula.

A. Hume & Davison, Stray Feathers, vi, 1878.
 B. Müller, Die Ornis der Insel Salanga, 1882.
 C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
 D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
 F. Robinson and Kloss, Ibis, 1910-11.
 G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
 H. Robinson, Journ. F. M. S. Museums, v, 1915.

STRIGIFORMES.

OWLS.

1	{ Middle toe pectinate on inner margin	2
	{ Middle toe not pectinate on inner margin	3
2	{ Colour above rich bay, smaller	<i>Photodilus badius.</i> <i>Tyto flammea javanica.</i>
	{ Colour above greyish yellow, larger	
3	{ Facial disc and ruff well marked	4
	{ Facial disc and ruff ill marked	5
4	{ Upper surface spotted with white	<i>Strix orientalis orientalis.</i> <i>Strix indrancee maingayi.</i>
	{ Upper surface not spotted with white	
5	{ Ear tufts well marked	6
	{ Ear tufts wanting	14
6	{ Size large, wing over 12 inches	7
	{ Size small, wing under 8 inches	10
7	{ Tarsi nearly naked	8
	{ Tarsi mainly feathered	9
8	{ Paler; under surface of tail with 5 cross bars	<i>Ketupa zeylonensis.</i> <i>Ketupa ketupu.</i>
	{ Darker; under surface of tail with 20 cross bars	
9	{ Smaller; wing less than 14.3 inches, under surface barred; no shaft stripes to feathers	<i>Huhua sumatrana.</i> <i>Bubo coromandus klossi.</i>
	{ Larger; wing more than 16 inches, under surface not barred; with shaft stripes to feathers	
10	{ Claws and bill pale clear yellow	11
	{ Claws and bill corneous or tinged with greenish	12
11	{ Larger; wing over 7 inches; forehead whitish	<i>Otus sagittata.</i> <i>Otus luciae.</i>
	{ Smaller; wing under 6 inches; forehead not white	
12	{ Feathering not extending to base of toes; more uniform above; smaller	<i>Otus scops malayana.</i>
	{ Feathering extending to base of toes; more blotched with black above; larger	
13	{ Larger, wing over 5.6 inches; toes more feathered	<i>Otus bakkamoena lettia.</i> <i>Otus b. lempiji.</i>
	{ Smaller, wing less than 6.3 inches; toes less feathered	
14	{ Barred above	15
	{ Uniform above	16
15	{ Smaller, with a cervical collar	<i>Glaucidium brodiei brodiei.</i> <i>Glaucidium cuculoides cuculoides.</i>
	{ Larger, without a cervical collar	
16	{ Wing over 8 inches	<i>Ninox scutulata malaccensis.</i>
	{ Wing less than 8 inches	
17	{ Darker above	<i>Ninox scutulata scutulata.</i> <i>Ninox scutulata burmanica.</i>
	{ Paler above	

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Photodilus badius (Horsf.).

Strix badius, Horsfield, Zool. Res. Java, 1824, plate (Java).

Photodilus badius, E., p. 112 (Perak); I., p. 122 (North Siam).

A bird of extreme rarity, of which we have only obtained three or four specimens from the southern parts of the Peninsula. It is certain to be found in Patani.

159. Tyto flammea javanica (Gm.).

Strix javanica, Gmelin, Syst. Nat. i, 1788, p. 295 (Java).

Strix flammea, G., p. 150 (Ratburi and Petchaburi).

Apparently common in Bangkok, but of very doubtful occurrence from much further south.

160. Strix orientalis orientalis (Shaw).

Strix orientalis, Shaw, Gen. Zool. vol. vii, part i, 1809, p. 257 (China).

Syrnium seloputo, A., p. 28 (Bankasoon); E., p. 112 (Patani); F., p. 30 (Trang); L., p. 94 (Junk Seylon); Williamson, Journ.

Nat. Hist. Soc. Siam, iii, 1918, p. 26 (Bandon).

Syrnium sinense, C., ii, p. 164 (South Tenasserim); D., p. 58 (Patani).

Strix orientalis orientalis, Oberholser, Proc. U. S. Nat. Mus., 52, 1917, p. 191.

Strix seloputo, M. I., p. 26 (Peninsular Siam).

Certainly commoner in the northern parts of the Peninsula than further south.

161. Strix indranee maingayi (Hume & Davison).

Syrnium maingayi, A., p. 27 (Malacca); F., p. 31 (Trang); Sharpe, P. Z. S. 1887, p. 470 (Malacca).

Strix indrani maingayi, M. I., p. 26 (Tung Song, Peninsular Siam.)

We have six specimens of this rare owl from Trang southwards to Selangor, all agreeing well with Hume's and Sharpe's descriptions. We cannot agree that both *S. i. newarensense* and *S. i. maingayi* can occur in the same area, and the specimen referred to the former by Sharpe from the the Larut Hills (P. Z. S. 1887, p. 434) must be *S. i. maingayi*, as we have a specimen from within a few miles of the locality, which is certainly that race. The female

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

from Chong, Trang, has the under surface rather less ochraceous than more southern birds.

162 *Ketupa zeylonensis* (Gm.).

Strix zeylonensis, Gmelin, Syst. Nat. i, 1788, p. 287 (Ceylon).

Ketupa zeylonensis, A., p. 33 (Tavoy, Pakchan); F., p. 30 (Trang); H., p. 90 (Bandon).

♂, ♀. Tapli, Pakchan, Peninsular Siam. 4-8 March, 1919 (Nos. 4421, 4488).

"Iris chrome; bill greenish-grey, tipped with black; feet dirty green."

Total length, ♂, 520; wing 420; tail 200; tarsus 88; bill from gape 48 mm.

Fairly common in ricefields, etc.

163. *Ketupa ketupu* (Horsf.).

Strix ketupu, Horsf., Trans. Linn. Soc. xiii, 1821, p. 141 (Java).

Ketupa javanensis, A., p. 33 (Tavoy to Malewoon); D., p. 58 Patani; F., p. 30 (Malay Peninsula); H., p. 91 (Bandon).

♀. Mamok, Pakchan, Peninsular Siam. 27 February, 1919. (No. 4298).

♂. Tapli, Pakchan, Peninsular Siam. 8 March, 1919. (No. 4514).

♀. Tasan, Chumpon, Peninsular Siam. 21 March, 1919. (No. 4752).

♀. Kandhuli, Chaiya, Peninsular Siam. 12 September, 1919.

"Iris chrome; bill black, cere greenish; feet dirty yellowish brown, pale greyish green."

Total length, ♂ 475, ♀ 477, 460; wing, ♂ 336, ♀ 365, 355; tail, ♂ 190, ♀ 200, 190; tarsus, ♂ 70, ♀ 70, 77; bill from gape, ♂ 43, ♀ 47, 53 mm.

We have examined series from Java, Borneo, Sumatra and the whole of the Malay Peninsula, and can distinguish no constant differences whatever, either in size or colouration, which can be associated with locality.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

164. *Huhua sumatrana* (Raffles).

Strix sumatrana, Raffles, Trans. Linn. Soc. xiii, 1822, p. 279 (Sumatra).

Bubo orientalis, A., p. 31 (Hankachin, Pakchan headwaters); C. ii, p. 153 (S. Tenasserim).

Huhua orientalis, F., p. 31 (Trang).

We have examined series from Sumatra, Borneo and the north and south of the Malay Peninsula and can detect no differences in size. Malay Peninsular and Sumatran birds are identical and will, therefore, have to be called *H. sumatrana*, though whether they are truly distinguishable from the typical *H. o. orientalis* Horsf., from Java, is, in the absence of specimens, still an open question. The Bornean birds do not differ in size from the others, but are less distinctly barred beneath. Schlegel* has named the bird from Banka, *B. o. minor*, which seems to be identical with the Sumatran and Malay Peninsular bird.

165. *Bubo coromandus klossi* Robinson.

Bubo coromandus klossi, Robinson, Journ. F. M. S. Mus. iv, 1911, p. 247 (Perak); K., p. 90 (Koh Lak); Herbert, Journ. N. H. S. Siam. ii, 1916, p. 58 (S. W. or Peninsular Siam); M. I, p. 26 (Peninsular Siam).

"Iris yellow; bill greenish horny, black at base; feet leaden."

Total length, ♂ 540, ♀ 545; wing, ♂ 399 (type) 380, ♀ 385; bill from gape, ♂ 46 (type) 43, ♀ 46 m.m.

This race is at present known from seven specimens only, ranging from Koh Lak in S. W. Siam to Malacca; it differs from the Indian form in its very much darker colour.

Otus sagittata (Cass.).

Ephialtes sagittatus, Cass., Proc. Ac. Nat. Sc. Philad. iv., 1850, p. 121 (Malacca).

Scops sagittatus, A., p. 35 (Malewoon); C., ii, p. 156 (Malewoon).

A species of extreme rarity which, however, is certain to be found in the area; we have a single male from Bukit Tangga, Negri Sembilan.

* Mus. Pays Bas, *Oti.* p. 13 (1862), p. 5 (1873).

A. Hume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

166. *Otus luciae* (Sharpe).

Heteroscoops luciae, Sharpe, Ibis, 1888, p. 478 Kina Balu, Borneo).
Heteroscoops vulpes, O. Grant, Bull. Brit. Orn. Club. xix, 1906, p. 11
 (Pahang); H., p. 91 (Bandon).

Our single female from Bandon differs in certain respects from the rest of our series from the more southern parts of the Peninsula, notably in the colour of the flanks and abdomen, but we are not as yet prepared to name it, nor do we think that the separation of the Malayan and Bornean birds is justified on the existing material.

167. *Otus scops malayana* (Hay).

Scops malayana, Hay, Madras Journ. L. S., 1845, xiii, pt. 2., p. 147 (Malacca); B., p. 76 (Junk Seylon); F., p. 31 (Trang, Langkawi Ids.).

Otus scops malayana, J., p. 145 (Langkawi Ids.); L., p. 94 (Junk Seylon.).

Scops pennatus, A., p. 34 (Mergui).

The Little Owl is fairly common in the north of the Peninsula and is met with in two phases, a greyish brown and a clear rufous. The synonymy is so complicated, and the question of local races so obscure, that we have placed all our specimens under Hay's name, though it is possible that other or earlier titles may properly apply.

168. *Otus bakkamoena lettia* (Hodgs.).

Scops lettia, Hodgson, Asiat. Res. xix, 1836, p. 176 (Nepal).

Otus bakkamoena lettia, J., p. 145 (Pulau Dayang Bunting, Langkawi Ids.).

Probably only a migrant or winter visitor in the extreme south of Peninsular Siam, but certainly separable from *O. b. lempiji* on account of its much larger size. It is this form which is common in Bangkok.

169. *Otus bakkamoena lempiji* (Horsf.).

Scops lempiji, Horsf., Trans. Linn. Soc. xiii, 1821, p. 140 (Java); F., p. 31 (Langkawi Ids.); H., p. 91 (Bandon).

Otus bakkamoena lempiji, J., p. 145 (Langkawi Ids.).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
 Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

This is a southern resident form which probably extends well up Peninsular Siam, and also occurs in S. E. Siam and Cambodia.

170. *Glaucidium brodiei* (Burton).

Noctua brodiei, P. Z. S. 1835, p. 152 (Himalaya region).

Glaucidium brodiei, A., p. 39 (Tavoy); H., p. 91 (Kao Nong, Bandon).

♂, ♀. Tapli, Pakchan, Peninsular Siam. 4 March, 1919. (Nos. 4407-4408).

"Iris yellow; bill greenish-yellow, tip yellow; feet greenish yellow."

Total length, ♂ 148, ♀ 175; wing, ♂ 89, ♀ 101; tail, ♂ 58, ♀ 64; tarsus, ♂ 19, ♀ 20; bill from gape, ♂ 15, ♀ 15 mm.

The above specimens, and one from Bandon, have the top of the head broadly and clearly barred. In five specimens, from the mountains of Perak and Selangor, these bars are much less defined and smaller, almost assuming the appearance of a spot on either side of the shaft. There is also a tendency to a smaller number of tail bars. They are not referable to *G. b. sylvaticum* (Bp.), from the mountains of Sumatra and Borneo, which has a white cervical collar.

171. *Glaucidium cuculoides cuculoides* (Vigors).

Noctua cuculoides, Vigors, P. Z. S. 1830, p. 8 (Himalayas).

Glaucidium cuculoides, A., p. 37 (Tavoy and Estuary); G., p. 150 (Ratburi and Petchaburi); I., p. 122 (Hat Sanuk, nr. Koh Lak); K., p. 89 (Koh Lak).

Athene cuculoides brugeli, Parrot, Ornith. Geschell. in Bayern, viii, 1907, p. 104 (Bangkok).

Glaucidium cuculoides cuculoides, M. I, p. 27 (Maprit, S. W. Siam).

6 ♂. Koh Lak. 1-9 April, 1919. (Nos. 4924, 5085, 5176-7 5196-7).

3 ♂, 1 ♀. Hat Sanuk, nr. Koh Lak. 13-16 April, 1919. (Nos. 5267, 5287, 5340, 5345).

"Iris chrome yellow; bill greenish, yellowish at tip, bluish at base; feet greenish yellow."

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Total length, ♂ 230, 223, 210, 222, 218, 218, 245, 224, 233, ♀ 228; wing, ♂ 136, 145, 144, 142, 150, 152, 151, 146, 142, ♀ 140; tail, ♂ 82, 84, 85, 86, 90, 90, 93, 85, 84, ♀ 85; tarsus, ♂ 27, 27, 26, 24, 26.5, 24, 25, 25, ♀ 25; bill from gape, ♂ 21, 20, 21.5, 20, 21.5, 22, 21, 21, ♀ 21 mm.

On dimensions, etc., our large series are identical with the single specimen described by Parrot as above. We do not, however, see that he has made out a case for separating it from the N. W. Himalayan bird, and therefore have not used his name.

172. *Ninox scutulata malaccensis* (Eyton). = *Scut. malacc.*

Athene malaccensis, Eyton, Ann. & Mag Nat. Hist., xvi, 1845, p. 228 (Malay Peninsula).

Ninox scutulata malaccensis, J., p. 144 (Langkawi Ids); L., p. 94 (Junk Seylon).

The *smaller* darker resident form, common throughout the area.

173. *Ninox scutulata scutulata* (Raffles).

Strix scutulata, Raffles, Trans. Linn. Soc. xiii, 1822, p. 280 (Sumatra).

Ninox scutulata scutulata, J., p. 143 (Langkawi Ids; Pulau Lontar).

This is the *larger* migratory form, which is common on the islands of the Straits of Malacca during the winter months.

174. *Ninox scutulata burmanica* (Hume).

Ninox burmanica, Hume, Stray Feathers, iv, 1876, p. 285 (Pegu and Tenasserim); A., p. 40 (Mergui); *Ninox burmanica*, type region restricted to Tenasserim.

Ninox scutulata, C. ii, p. 159 (Tenasserim).

Ninox scutulata burmanica, K., p. 89 (Inner Gulf of Siam).

Ninox scutulata (subsp ?); L., p. 121 (North Siam).

A bird larger and paler than *N. s. malaccensis*, found as yet only in the extreme north of our area and with difficulty separable from *N. n. scutulata*.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

PSITTACIFORMES.

PARROTS.

1	{ Tail square	2
	{ Central tail feathers elongated	4
2	{ Wing coverts uniform green	3
	{ Wing coverts not uniform green	<i>Psittinus cyanurus cyanurus.</i>
3	{ Both mandibles black	<i>Loriculus galgulus.</i>
	{ Both mandibles orange	<i>Loriculus vernalis.</i>
4	{ Crown green	<i>Palaeornis longicauda.</i>
	{ Crown not green	5
5	{ No frontal black band reaching to eyes	<i>Palaeornis cyanocephala rosa.</i>
	{ A frontal black band reaching to eyes	<i>Palaeornis alexandri fasciata.</i>

175. *Psittinus cyanurus cyanurus* (Forst.).

Psittacus cyanurus, Forst., Faun. Ind. 1795, p. 6 (ex. Latham, Gen. Syn. Suppl. 1, p. 66, 1787, Malacca).

Psittinus incertus, A., pp. 120, 500 (Tavoy to Malewoon); C. ii, p. 501; D., p. 76 (Patani).

Psittinus malaccensis, E., p. 112 (Patani).

Seeing that it is common in Tenasserim, as far south as Tavoy, it is probable that it will be found quite abundant in Peninsular Siam. The species, however, like *Palaeornis longicauda*, though common in a district at one time may suddenly disappear for years. At present the only specimens on record are:—two males and a female, all obtained at Biserat, Jalor, in Patani, one by the Skeat expedition in June 1899, and two by Robinson in July and October 1901. We have specimens also from Pelarit, Perlis.

“Male. Iris red; upper mandible red, lower greenish; feet greenish. Female. Iris pale green with an outer ring of white; bill yellowish horn, darker on upper mandible; feet pale sage green.”

Mr. Williamson's collector also obtained two females and a male at Naihoot near Langsuan in November 1921. He records the iris of all three as “yellowish white”. Total length, ♂ 190, ♀ 180, 175 mm.

A. Hume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Borneo, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

176 *Loriculus galgulus* (Linn.).

Psittacus galgulus, Linn., Syst. Nat. i, 1766, p. 150 (India).

Loriculus galgulus, D., p. 73 (Patelung and Patani); E., p. 112 (Patani).

The only records from Peninsular Siam are, 2 immature males obtained by Robinson at Biserat, Jalor, in July 1901, and an unsexed bird from Patelung obtained by the Skeat expedition in April 1899; the latter was not improbably a cage bird. Mr. Williamson's collection also contains a male and an immature female from Bangnara, Patani State, shot on 29th July, 1916. We have also secured it at Pelarit, Perlis, in October 1911 within five or six miles of the Siamese boundary, so the species is probably quite common in the extreme south of Peninsular Siam; except for these records it has not been obtained north of Province Wellesley.

177. *Loriculus vernalis* (Sparrm.).

Psittacus vernalis, Sparrm., Mus. Carls. t. 29, 1787 (Unknown).

Loriculus vernalis, A., pp. 120, 500 (Tavoy to Malewoon); C., ii, p. 146 (Tenasserim to Tongka); F., p. 32 (Trang); H., p. 91 (Bandon).

Coryllis vernalis, B., p. 76 (Puket or Junk Seylon); M., p. 443 (Peninsular Siam).

♀. Tung Pran, Takuatung, W. Peninsular Siam. 14 February, 1919. (No. 4020).

♂, ♀. Tapli, Pakchan Estuary, Peninsular Siam. 2-8 March, 1919 (Nos. 4348, 4501).

♂ ♂. Tasan, Chumpon, Peninsular Siam. 15-20 March, 1919 (Nos. 4612, 4712).

"Iris white; bill orange; feet yellow." Total length, ♂ 142, 140, 128, ♀ 142, 146; wing, ♂ 90, 88, 89, ♀ 87, 93; tail, ♂ 41, 48, 43, ♀ 42, 43; tarsus, ♂ 9, 10, 11, ♀ 10, 10; bill from gape, ♂ 13, 12, 11, ♀ 11.5, 11.5 mm.

Sparingly but widely spread over the area; quite common at Takuatung among flowering shrubs near the beach; not met with in

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

such large flocks as *L. gulgulus*. We have also examined a male shot in November 1921, at Naihoot, Langsuen, by Mr. Williamson's collector. "Iris yellowish-white; bill red; feet deep yellow. Length 135 mm."

***Palaeornis* longicauda* (Bodd.).**

Psittacus longicauda, Bodd., Tabl. Pl. Encl. 1783, p. 53 (Malacca).

It is probable that the Malay Green-headed Parroquet will be found in the southern districts of the Patani province. It has been recorded from Ulu Selama in North Perak (Bonhote, P. Z. S. 1901, p. 76), and is therefore inserted in our "key."

178. *Palaeornis cyanocephalus rosa* (Bodd.).

Psittacus rosa, Bodd., Tabl. Pl. Enl. 1783, p. 53 (India).

Palaeornis cyanocephalus, A., p. 118 (Tavoy); C., ii, p. 145.

Palaeornis rosa, G., p. 150 (Ratburi and Petchaburi); K., p. 90 (Koh Lak).

Koh Lak is the southernmost known limit of the eastern form of the Blossom-headed Parroquet, which is also found in Southern Annam.

179. *Palaeornis alexandri fasciata* (P. L. S. Müll.).

Psittacus fasciatus, P. L. S. Müll., Syst. Nat. Suppl. p. 74 of 1776.

Palaeornis melanorhynchus, A., p. 120 (Tavoy to Mergui).

Palaeornis fasciata, C., ii, p. 143 (Tenasserim); G., p. 150 (Ratburi and Petchaburi); Herbert, Journ. Nat. Hist. Siam, i, 1914, p. 118 (Chiengrak, nr. Bangkok).

♀. imm. Koh Pra Tang, Takuapah Inlet, W. Peninsular Siam. 17 February, 1919. (No. 4081).

"Iris whitish; bill black; feet dirty greenish white."

Total length, 272; wing 145; tail 90 (imp.); tarsus 15; bill from gape 22 mm.

The specimen, which is very young has a narrow black line from eye to eye across the forehead, which is lavender in front,

*Though Oberholser is doubtless correct in his contentions, we cannot bring ourselves to use *Conurus* as the name for this genus of parrot. *Conurus* is too well known for a large Neotropical genus.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1892.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

crown green, sides of face lavender-grey with broad black mandibular stripes, no yellowish green scapular patches; under wing-coverts green.

This example constitutes a southerly record for the species which has not hitherto been found south of the Isthmus of Kra.

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|---|---|
| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. |
| 56, No. 2, 1916. | (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. |
| K. Kloss, Ibis, 1918. | (second part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. |
| iii, 1919. | (third part). |

PODARGIDAE.

FROGMOUTHS.

180. *Batrachostomus affinis* Blyth.

Batrachostomus affinis, Blyth, Journ. Asiat. Soc. Bengal. xvi, 1847, p. 1180 (Malacca); G., p. 150 (Ratburi and Petchaburi).

♂. Tasan, Chumpon, Peninsular Siam. 13 March, 1919.

(No. 4555).

"Iris pale yellow; bill pinkish horn; feet pale pinky white."

Total length 228; wing 121; tail 125; tarsus 14; bill from gape 33 mm.

Shot in heavy evergreen jungle.

A bird marked female in Mr. Williamson's collection from Nailhoot, Langsuen, shot on 6th November 1921, is almost uniform foxy red, except for the white, black-bordered spots on the scapulars and a band of similar spots on the breast and upper abdomen.

"Iris yellowish-white; bill above yellowish-brown and below yellow; legs flesh. Length 220 mm."

For the present we refer it to this species.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

CORACIIDAE.

ROLLERS.

- | | | | |
|---|---|---|---|
| 1 | { Bill compressed, black | <i>Coracias affinis</i> . | |
| | { Bill depressed, vermilion .. .. . | .. .. . | 2 |
| 2 | { Outer secondaries largely blue | <i>Eurystomus orientalis calonyx</i> . | |
| | { Outer secondaries largely black | <i>Eurystomus orientalis orientalis</i> . | |

181. *Coracias affinis* McClell.

Coracias affinis, McClelland, P. Z. S. 1839, p. 164 (Assam); A., p. 72 (Tavoy and S. Tenasserim); W. Davison (*in litt.* Junk Seylon and Kussoon); E., p. 109 (Patani); G., p. 150 (Ratburi and Petchaburi); I., p. 117 (Koh Lak); K., p. 91 (S. W. Siam) *Coracias affinis theresiae*, Parrot, Verhandl. Ornith. Gesellschaft Bayern. viii, 1911, p. 97 (Bangkok).

♂, ♀. Koh Lak, S. W. Siam. 3-4 April, 1919. (Nos. 5003-5056).

"Iris dark hazel; bill black; feet dirty yellow."

Total length, ♂ 320, ♀ 310; wing, ♂ 187, ♀ 172; tail, ♂ 120, ♀ 118; tarsus, ♂ 25, ♀ 25; bill from gape, ♂ 42, ♀ 45 mm.

A male from Nong Khai, S. W. Siam, 31 December, 1917, measures, total length 315, wing 187; and two unsexed specimens from Patani, dated April 1916, wing 184, 182 mm. All in Mr. Williamson's collection.

The principal character for Parrot's race, *C. a. theresiae* (*loc. cit. supra*), is not borne out by the considerable series we have examined from Siam and Indo-China.

182. *Eurystomus orientalis calonyx* Sharpe.

Eurystomus calonyx, Sharpe, P. Z. S. 1890, p. 551 (Himalayan Terai); E., p. 110 (Patani); F., p. 32 (Trang).

Eurystomus orientalis calonyx, L., p. 95 (Ghirbi, Junk Seylon, Pulau Panjang); M., p. 432 (Peninsular Siam).

♂. Tung Pran, Takuatung, W. Siam. 14 February, 1919. (No. 4015).

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| I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

"Iris dark hazel; bill and feet vermilion, former tipped black."

Total length 305; wing 202; tail 110; tarsus 20; bill from gape 33 mm.

The fact that these two races are often found in the same place, commented on by Stuart Baker (*loc. cit. supra*) is, of course, explained by the fact that *E. o. orientalis* is a resident breeding form, and *E. o. calonyx* a migratory race breeding in North China and the Himalayas (?).

183 *Eurystomus orientalis orientalis* (Linn.).

Coracias orientalis, Linn., Syst. Nat. 1766, p. 159 (India).

Eurystomus orientalis, D., p. 68 (Patani); E., p. 110 (Patani); F., p. 32 (Trang); p. 144 (Koh Samui and Koh Pennan); J., p. 151 (Trang); L., p. 95 (Ghirbi).

1 ♂. Koh Rah, Takuapah. 17 February, 1919. (No. 4062).

3 ♀. Namchuk, Pakchan, Peninsular Siam. 25-26 February, 1919. (Nos. 4239, 4249-50).

♂, ♀. Tapli, Pakchan, Peninsular Siam. 2nd March, 1919 (No. 4341, 4342) 2 ♂, 2 ♀. Hat Sanuk, nr. Koh Lak, S. W. Siam. 14-17 February, 1919. (Nos. 5289, 5349, 5350, 5352).

"Iris dark; bill vermilion tipped black; feet vermilion."

Total length, ♂ 300, 276, 274, 290, ♀ 278, 283, 278, 290; wing, ♂ 183, 177, 184, 186, ♀ 183, 186, 192, 172; tail, ♂ 107, 103, 106, 105, ♀ 107, 104, 100, 103; tarsus, ♂ 20, 22.5, 18.5, 20, ♀ 19, 19, 21, 21.5; bill from gape ♂ 39.5, 38, 38, 39, ♀ 35, 37, 41, 38 mm.

It is impossible to say to which race may belong the specimens recorded as *Eurystomus orientalis* from Tavoy to Bankasoon (A., p. 73), Junk Seylon (B. p. 41) and South Tenasserim (C. ii. p. 71).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

ALCEDINIDAE.

KINGFISHERS.

1	{ With three toes	2
	{ With four toes	3
2	{ Mantle bluish or black	<i>Ceryx t. tridactylus.</i>
	{ Mantle reddish orange	<i>C. r. rufidorsus.</i>
3	{ Plumage black and white	<i>Ceryle rudis leucomelanura.</i>
	{ Plumage not black and white	4
4	{ Tail shorter than culmen	5
	{ Tail longer than culmen	8
5	{ Wing more than 3.5 inches	<i>Alcedo euryzona.</i>
	{ Wing less than 3.2 inches	6
6	{ Ear-coverts ferruginous	<i>A. atthis bengalensis.</i>
	{ Ear-coverts blue	7
7	{ Scapulars deep blue	<i>A. m. meninting.</i>
	{ Scapulars black	<i>A. m. scintillans.</i>
8	{ Plumage barred	<i>Carcineutes pulchellus.</i>
	{ Plumage not barred	9
9	{ Wing 5.5 inches or more	10
	{ Wing at most 5 inches	12
10	{ Wings brown	<i>Ramphalcyon amauroptera.</i>
	{ Wings blue	11
11	{ Pileum paler	<i>R. capensis burmanica</i>
	{ Pileum darker	<i>R. c. malaccensis.</i>
12	{ With no white on under surface	13
	{ Under surface partly or entirely white	14
13	{ Head and mantle uniform cinnamon rufous	<i>Halcyon c. coronanda.</i>
	{ Head greenish, mantle blue or green	<i>H. concreta.</i>
	{ Head black	<i>H. pileata.</i>
14	{ Head blue	<i>H. chloris.</i>
	{ Head chestnut	<i>H. smyrnensis fusca.</i>

184. *Ramphalcyon amauroptera* (Pearson).

Halcyon amauropterus, Pearson, Journ. Asiat. Soc. Bengal, x, 1841, p. 635 (Calcutta).

Pelargopsis amauroptera, A., p. 73 (Mergui to Malewoon); B., p. 46 (Junk Seylon); C. ii, p. 78 (Tenasserim to Junk Seylon); E., p. 33 (Trang and Langkawi); J., p. 146 (Langkawi and Terutau).

Ramphalcyon amauroptera, Oberholser, Proc. U. S. Nat. Mus. xxxv, 1909, p. 661.

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
 J. Robinson, Journ. F. M. S. Mus. vii, 1917. Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
 K. Kloss, Ibis, 1918. M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

♂. Tung Pran, Takuatung, W. Peninsular Siam, 12 February 1919 (No. 3956).

"Iris dark; bill and feet blood red".

This Kingfisher is never found far from salt water, but is fairly common along the coasts and islands of W. Peninsular Siam and as far south as the Langkawi group: we are not aware that it has been met with on the east coast of the Peninsula.

185. *Ramphalcyon capensis burmanica* (Sharpe).

Pelargopsis burmanica, Sharpe, P. Z. S. 1870, p. 67 (Toung-hoo, Burma); A., p. 73 (Tavoy to Bankasoon); C. ii, p. 78; (Tenasserim and southwards).

Pelargopsis fraseri, E., p. 111 (Pattani?).

Ramphalcyon capensis burmanica, Oberholser, Proc. U. S. Nat. Mus. xxxv, 1909, p. 670.

Pelargopsis malaccensis, H., p. 145 (Koh Penman); B., p. 46 (Junk Seylon?).

Pelargopsis capensis malaccensis, I., p. 114 (Koh Lak).

Pelargopsis gurali burmanica, Williamson, Journ. N. H. S. Siam, ii, 1917, p. 334 (Bangkok; S. W. Siam).

Pelargopsis javana malaccensis, Parrot, Verh. Orn. Ges. Bayern, 8, 1908, p. 112 (Péchéaburi).

♂. Namchuk, Pakchan, Peninsular Siam, 25 February 1919 (No. 4234).

2 ♂. Koh Lak, S. W. Siam, 3 April 1919 (Nos. 4998-9).

♀. Hat Sanuk, S. W. Siam, 15 April 1919 (No. 5317).

♂. Kandhuli, Chaiya, Peninsular Siam, 13 September 1919 (E. Seimund).

"Iris dark, eyelid crimson; bill blood red, darker at tip; feet coral, claws dark horn."

Total length ♂, 372, 365, 373; ♀, 373; wing ♂, 141, 152, 148; ♀, 152; tail, ♂ 100, 108, 112; ♀, 113; tarsus ♂, 16, 18.5, 18; ♀, 16; bill from gape ♂, 93, 94, 94; ♀, 94 mm.

All this series have a dull clay-coloured cap, washed with green but quite unstreaked. Beneath, the colour is somewhat rich ochraceous rufous, deeper in tint than specimens of the Peninsula

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1892.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonholc, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

from Kedah to Johore. On the whole it appears best to follow the majority of authors, including Dr. Sharpe, and assign the series to *R. c. burmanica*. We are, however, not entirely convinced that this form should not be regarded as restricted to a still more northerly habitat, seeing that the type came from Tounghoo and that these birds are merely another intermediate link having stronger affinities with *R. c. burmanica* than with *R. c. malaccensis*, just as the reverse is the case with birds from localities further down the Peninsula. It is possible that individuals from the vicinity of Bandon and Junk Seylon and to the southward should all be listed as *malaccensis* (Sharpe), thus bringing that race into the area here dealt with.

186. *Ceryle rudis leucomelanura* Reichenb.

Ceryle leucomelanura, Reichenb., Handl. Alced., 1851, p. 21, Taf. 409B, fig. 3488.

Ceryle varia, G., p. 150 (Ratburi and Petchaburi); Herbert, Journ. N. H. S. Siam, i, 1914, p. 56 (neighbourhood of Bangkok).

Ceryle rudis leucomelanura, Williamson, Journ. N. H. S. Siam, ii, 1917 p. 329 (Bangkok); Gairdner, Journ. N. H. S. Siam, iii, 1919, p. 229 (Petchaburi river); M., p. 433. (Bangkok).

Will not improbably be found as far south as Koh Lak, in S. W. Siam.

187. *Alcedo atthis bengalensis* (Gm.).

Alcedo bengalensis, Gm., Syst. Nat. i, 1788, p. 450 (Bengal); A., p. 81 (S. Tenasserim); B., p. 44 (Junk Seylon) C. ii, p. 72; F., p. 32 (Peninsular Siam).

Alcedo ispida, G., p. 150 (Ratburi or Petchaburi).

Alcedo ispida bengalensis, L., p. 114 (Koh Lak); J., p. 146 (Trang; Langkawi; Terutau); K., p. 90 (Tachin; Koh Lak); L., p. 95 (Junk Seylon, etc.); Williamson, Journ. N. H. Soc. Siam, ii, 1917, p. 331 (Bangkok; Peninsular Siam).

♀. Tung Pran, Takuatung, W. Peninsular Siam, 12 February 1919 (No. 3957).

♂. Tasan, Chumporn, Peninsular Siam, 16 March 1919 (No. 4632).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

♂. Koh Lak, Rajburi, S. W. Siam, 7 April 1919 (No. 5136).

♀. Hat Sanuk, Rajburi, S. W. Siam, 17 April 1919 (No. 5351).

"Male, iris dark; bill black, reddish at base of mandible only; feet vermilion, claws black. Female, with the lower mandible almost entirely dull red".

Total length ♂, 165, 164; ♀, 161, 168; wing ♂, 70, 68; ♀, 70, 70; tail ♂, 35, 33; ♀, 38, 38; tarsus ♂, 10, 9; ♀, 9, 9; bill from gape ♂, 45, 47; ♀, 45, 46 mm.

Universally distributed in suitable localities.

188. *Alcedo euryzona* Temm.

*Alcedo euryzona**, Temm, Pl. Col. livr. 86, text (Java); F., p. 33 (Trang); H., p. 91 (Bandon).

Alcedo nigricans, Blyth, Journ. Asiat. Soc. Bengal, xvi, 1847, p. 1180 (Malacca); A., pp. 81, 496 (Nwalabo and Bankison).

♀ subad. Chong, Trang, 18 December 1909, F. M. S. Mus. No. 461/10.

♂ ad. Patelung - Trang boundary, 25 December 1909, F.M.S. Mus. No. 463/10.

♂ ad., ♀ ad. Kao Nawng, Bandon, 1200-1500 ft., 17-18 June 1913.

"Male vix ad. Iris dark; bill black, whitish at tip; feet flesh. Female ad. Iris dark hazel; upper mandible dark horn, lower reddish; feet flesh.

The males above cited, and two others from Pahang, are all very nearly adult though two have pale tips to the bill: they differ from a male from Saribas, S. W. Sarawak, in having the flanks more or less washed with rufous and the blue tips to the feathers of the crown and wing coverts more conspicuous. The Bornean bird is, however, an extremely adult one and we do not think that it would be wise to admit *A. nigricans* Blyth, founded on a female, as a mainland race of *A. euryzona*.

*Spelt *cryzona* in the original description.

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Inselalanga, 1882.

C. G. Bates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

189. *Alcedo meninting meninting* Horsf.

Alcedo meninting, Horsfield, Trans. Linn. Soc. xii, 1821, p. 172 (Java); B., p. 45 (Junk Seylon); E., p. 111 (Patani); F., p. 32 (Terutau); L., p. 95 (Junk Seylon).

Alcedo meninting meninting, Baker, Bull. Brit. Orn. Club, xxxix, 1918, p. 37 (Malay Peninsula, north to Bankasoon).

We have not sufficient material available to discuss in detail Mr. Stuart Baker's recent article on this Kingfisher (*tom. cit. supra*, pp. 37-40). The specimens referred to above are identical with birds from the southern Malay Peninsula, south to Johore, and have the scapulars deep blue, not black. All of our considerable series from the Malay Peninsula, south to Johore, Borneo and Sumatra, differ from a pair of adults from Java in having the blue of the upper surface deeper and less turquoise. If the distinction can be maintained, and judging from analogy it is probably a real one, our birds will have to be called *Alcedo meninting verreauxi* De la Berge, Rev. et Mag. de Zool. (2), iii, 1851, p. 305, pl. 9 (Borneo) — the bird described and figured being an immature female.

190. *Alcedo meninting scintillans* Stuart Baker

Alcedo beavani (part.), A., pp. 84, 499 (Tavoy to Malewoon).

Alcedo meninting scintillans, Stuart Baker, Bull. Brit. Orn. Club, xxxix, 1918, p. 38 (type locality Bankasoon, and between Lat. 10° and 16° N.); M., p. 433 (Peninsular Siam).

Stuart Baker has separated this southern Tenasserim and southern Siam bird on account of the scapulars being black in adult and immature birds alike. We have not yet seen specimens from the area now dealt with. Baker refers one specimen from Klong Wang Hip (Lat. 8° N.) to this new race to which, however, our specimen from Junk Seylon, in about the same latitude, cannot be attached.

191. *Ceyx tridactylus tridactylus* (Pall.).

Alcedo tridactyla, Pallas, Spic. Zool. vii, 1760, p. 10, ab. 2. fig. 1 (India: Assam restricted).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, *Ibis*, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part.).

Ceyx tridactyla, A., pp. 80, 499 (Tavoy to Malewoon); B., p. 45 (Junk Seylon); C. ii, p. 80 (South Tenasserim); J., p. 146 (Terutau); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 433 (Malewoon); Williamson, Journ. Nat. Hist. Soc. Siam ii, 1917, p. 332 (Bangkok; Peninsular Siam).

7 ♂, ♀. Tazan, Chumporn, Peninsular Siam, 15–28 March 1919 (Nos. 4609, 2423, 4675, 4833–4, 4787–9).

“Iris dark; bill and feet vermilion”.

Total length ♂, 130, 128, 121, 133, 138; wing ♂, 55, 53, 57, 65, 57; tail ♂, 27, 28, 28, 28, 27; tarsus ♂, 8, 9, 8, 8, 8; bill from gape ♂, 38, 38, 36, 39.5, 38 mm.

All this series are fairly uniform and all are quite adult, as is shown by the uniform blue mantle: in one the frontal blue spot is entirely absent and in another it is somewhat reduced.

192. *Ceyx rufidorsus rufidorsus* (Strickl.).

Ceyx rufidorsa, Strickland, P. Z. S. 1846, p. 99 (Malacca); B., p. 45 (Junk Seylon).

Ceyx euerythra, Sharpe, Cat. Birds Brit. Mus. xvii, 1892, p. 179 (Klang, Selangor); F., p. 34 (Trang); H. p. 92 (Bandon).

Ceyx rufidorsa rufidorsa, Hartert, Nov. Zool. ix, 1902, p. 430.

The specimens referred to above from Bandon represent the northernmost extension of this species.

We have for the present followed Dr. Hartert in using Strickland's name for this bird and not that of Sharpe. We fail to see, however, even if Strickland's type is not an immature *Ceyx tridactylus*, why it should not be regarded as a young specimen of *Ceyx dilwynni*.

193. *Carcineutes pulchellus* (Horsf.).

Dacelo pulchella, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 175 (Java).

Carcineutes pulchellus, A., pp. 79, 499 (Tavoy to Malewoon); C. ii, p. 86; (Tenasserim); Müller, Journ. für Orn. 1882, p. 399; B., p. 47; (Junk Seylon); E., p. 111 (Patani); F., p. 34 (Trang); H., p. 92 (Bandon); G., p. 150 (Rajburi and Petchaburi).

Carcineutes amabilis, Hume, Stray Feath. i, 1873, p. 474 (Pegu Hills).

Carcineutes pulchellus amabilis, M., p. 434 (Tung Song).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910–11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂. Tapli, Pakchan Estuary, Peninsular Siam, 7 March 1919 (No. 4470).

"Iris yellowish brown; bill and eyelid vermilion; feet yellowish brown".

Total length, 211; wing, 84; tail, 72; tarsus, 16; bill from gape, 45 mm.

The Banded Kingfisher is sparingly distributed in dry jungle throughout Peninsular Siam, but, like other jungle Kingfishers, seems rarer than it is further south. It extends northwards to a latitude of about 19°. The present specimen has the nuchal rufous collar well developed, but like other birds from dry districts, has the under-surface paler, especially on the flanks, than south Malayan and Javanese birds. We are not at present disposed to regard S. W. and Peninsular Siam birds as even subspecifically distinct from the typical race, whatever may be the status of the Burmese, N. and E. Siam, and Annamese birds, of which we have not sufficient female specimens.

The more northern specimens, broadly speaking, show signs of losing the chestnut cervical collar, and the females have the flanks less barred; but these characters also appear in typical Javan specimens.

194. *Halcyon coromanda coromanda* (Lath.).

Alcedo coromanda, Lath., Ind. Orn. i. 1790, p. 252, (Coromandel Coast, ex. Sonnerat: eriore! Rangoon, Oberholser).

Halcyon coromandus, E., p. 110 (Patani); F., p. 34 (Trang); A., p. 75 (Tavoy, Malewoon); C. ii, p. 81.

Halcyon coromanda coromanda, Hartert, Vog. Palaarkt. Faun. ii, 1912, p. 896; J., p. 147 (Terutau).

Entomophora coromanda coromanda, Oberholser, Proc. U. S. Nat. Mus. 48, 1915, p. 643-5 (type locality designated as Rangoon).

Callialcyon coromanda, Müller, Journ. für Orn. 1882, p. 398; B., p. 46 (Junk Seylon).

♂ ad. Tung Pran, Takuatung, W. Peninsular Siam, 14 February 1919 (No. 4004).

"Iris dark; bill coral; feet paler coral."

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Total length, 255; wing, 108; tail, 70; tarsus, 17; bill from gape, 68 mm.

We have elsewhere dealt with this Kingfisher¹ and have shown that the N. E. Sumatran form is quite inseparable from that inhabiting the continent of Asia, except in the extreme south of the Peninsula, where *H. c. minor* occurs. The present species is widely though sparingly distributed along both coasts of Peninsular Siam, especially affecting casuarina groves. It is very numerous both in Singgora and at Tanjong Patani.

195. *Halcyon smyrnensis fusca* (Bodd.).

Alcedo fusca, Bodd., Tab. Pl. Enl., 1783, p. 54 (Malabar).

Halcyon smyrnensis, A., p. 74 (Tavoy to Pakchan); D., p. 69 (Patani); E., p. 110 (Patani); F., p. 34 (Peninsular Siam); H., pp. 92, 145 (Pandon; Koh Samui; Koh Penman).

Halcyon smyrnensis fusca, I., p. 116 (Koh Lak); K., p. 92 (Tachin); L., p. 96 (Ghirbi); Williamson, Journ. N. H. S. Siam, ii, 1917, p. 334 (Bangkok; S. W.; and Peninsular Siam),

♀. Namchuk, Pakchan Estuary, Peninsular Siam, 26 February 1919 (No. 4257).

♂. Tapli, Pakchan Estuary, Peninsular Siam, 8 March 1919 (No. 4495).

♀. Koh Lak, Rajburi, S. W. Siam, 4 April 1918 (No. 5058).

"Iris dark or dark brown; bill dark blood red, darker on tomia; feet reddish, dark red, or coral".

Total length ♂, 257; ♀, 283, 272; wing ♂, 120; ♀, 119, 116; tail ♂, 88; ♀, 88, 80; tarsus ♂, 16; ♀, 18, 17; bill from gape ♂, 65; ♀, 67, 62 mm.

There is much variation in the chestnut tint of the head and under surface, which is apparently due to age. Old specimens have a greenish gloss over the white of the breast, very perceptible in certain lights.

The species is widely distributed over the whole of Peninsular Siam near the sea and in open country, but is not met with in heavy jungle or at any great elevation.

¹ Kloss, Journ. Fed. Malay States Mus. x, 1921, pp. 215-217.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

196. *Halcyon pileata* (Bodd.).

Alcedo pileata, Bodd., Tabl. Pl. Enl, 1783, p. 41 (China).

Halcyon pileata, A., pp. 74, 499 (Tavoy to Bankasoon); E., p. 110 (Patani); F., p. 34 (Peninsular Siam); J., p. 148 (Langkawi and Terutau); L., p. 95 (Junk Seylon); Williamson, Journ. N. H. S. Siam ii, 1917, p. 335 (S. W. and Peninsular Siam).

Entomobia pileata, B., p. 46 (Junk Seylon).

♀. Pangnga, Peninsular Siam, 2 February 1919 (No. 3954).

♀. Tung Pran, Takuatung, Peninsular Siam, 14 February 1919 (No. 4010).

♀. Koh Rah, Takopah, Peninsular Siam, 15 February 1919 (No. 4028).

"Iris dark; bill blood red; feet dark red, scales edged with black."

Total length, 291, 305, 305; wing, 128, 130, 135; tail, 88, 93, 98; tarsus, 17, 17, 17; bill from gape, 68, 71, 77 mm.

Throughout its immense range, from Korea to Celebes, and from the Bombay Presidency to China, this species seems extraordinarily stable in its characters and is not divisible into local races.

It is very common in southern Peninsular Siam (though we did not actually collect specimens in Bandon) and rather less so as one travels northward.

197. *Halcyon chloris armstrongi* Sharpe.

Halcyon armstrongi, Sharpe, Cat. Birds Brit Mus. xvii, 1892, p. 277, pl. vii, fig. 1 (Siam).

Halcyon chloris, A., p. 78 (Tenasserim; Mergui); K., p. 92 (Tachin).

Halcyon chloris armstrongi, I., p. 117 (Koh Lak).

Sauropatis chloris chloris, M., p. 435 (Meklong, nr. Bangkok).

Sauropatis chloris, Salvad. Ann. Mus. Civ. Gen. (2) VII, 1889, p. 433 (Malewoon).

♂. Koh Lak, S. W. Siam, 2 April 1919 (No. 4947).

"Iris dark; maxilla black, mandible pinkish white, tip black; feet greenish."

Total length, 240; wing, 101; tail, 72; tarsus, 17; bill from gape, 57 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part.).

198. *Halcyon chloris humii* Sharpe.

Halcyon humii, Sharpe, Cat. Birds Brit. Mus. xvii, 1892, p. 281, pl. viii (Selangor).

Sauropatis chloris, B., p. 46 (Junk Seylon).

Halcyon humii, D., p. 69 (Patani); E., p. 110 (Patani).

Halcyon armstrongi, F., p. 34 (Langkawi and Terutau); H., p. 145 (Koh Samui and K. Pennan).

Halcyon chloris, J., p. 149 (Langkawi and Pulau Lontar); L., p. 96 (Pulau Panjang).

One of us has recently examined a large series of the Blue-and-white Kingfisher from the present area and is now of opinion that two races may fairly be recognised (Journ. F. M. S. Mus., x, 1921, p. 214), for though individuals do not always bear out this conclusion, yet in series the differences are quite tangible.

The northern form, *H. c. armstrongi*, has the ear-coverts of the same blue as the crown, though sometimes darker, the black nuchal band obsolete or absent, and only a slight buffy wash on the flanks. The southern race, *H. c. humii*, has ear-coverts more blackish, or of a darker different blue from the crown, the nuchal band pronounced, and the flanks more strongly washed with buff. The place where the forms intergrade seems to be in the neighbourhood of the Isthmus of Kra, and we have referred specimens accordingly.

199. *Halcyon concreta* (Temm.).

Dacelo concreta, Temm. Pl. Col. pl. 346, 1825 (S. W. Sumatra); Schleg. Mus. Pays Bas, Alced., 1863, p. 26.

Halcyon varia, Eyton, P. Z. S. 1839, p. 101 (Malacca, ♀).

Halcyon concreta, A., p. 76 (Bankasoon and Malewoon); C. ii, p. 84; F., p. 35 (Trang).

As far as Peninsular Siam is concerned, only recorded from Trang. In southern Tenasserim confined to the vicinity of the Pakchan Estuary where, however, we did not meet with it.

Most Bornean specimens have the blue of the upper surface darker, as also the blue malar stripe, which is blacker posteriorly; but the differences are not very definite and can be matched by one or two Malayan specimens. In females and younger males, both of Malayan and Bornean birds, the malar stripe is much brighter blue.

A. Hume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Inselalanga, 1882.
C. Oates, Birds Brit. Borneo, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

BUCEROTIDÆ.

HORNBILLS.

1	{ Central tail feathers much elongated	2
	{ Central tail feathers not elongated	3
2	{ Casque small, compressed, crest very full	<i>Berenicornis comatus.</i>
	{ Casque large, truncated in front, crest not full	<i>Rhinoplax vigil.</i>
3	{ Casque large and high	4
	{ Casque small and low	6
4	{ Casque broad, ending in a double point	<i>Dichoceros bicornis.</i>
	{ Casque compressed, ending in a single point	5
5	{ Outer tail feathers entirely white	<i>Anthraceros coronatus converus</i>
	{ Outer tail feathers only tipped with white	<i>A. albirostris.</i>
6	{ Casque compressed, smaller	7
	{ Casque broad, composed of transverse ridges, larger	8
7	{ Chin and throat naked	<i>Anorrlinus galeritus</i>
	{ Chin and throat feathered	<i>Ptilolæmus t. tickelli.</i>
8	{ Bases of mandibles plicated	<i>Rhytidoceros undulatus.</i>
	{ Bases of mandibles not plicated	<i>R. subruficollis.</i>

200. *Dichoceros bicornis* (Linn.).

Buceros bicornis, Linn., Syst. Nat. i, 1766, p. 153 (Sunda Straits).

Dichoceros cavatus, A., p. 98 (Pakchan; Bankasoon; Malewoon).

Dicoceros bicornis, B., p. 50 (Junk Seylon); D., p. 70 (Patani);

E., p. 108 (Patani); F., p. 35 (Terutau Id.); G., p. 150 (Rat-buri and Petchaburi); J., p. 150 (Telibun Id.); L., p. 96 (Ghirbi).

♂. Tung Pran, Takuatung, Peninsular Siam, 13 February 1919 (No. 3983).

♂, ♀. Tapli, Pakchan, Peninsular Siam, 2 March 1919 (No. 4358, 4360).

"Iris red; bill ivory, stained with yellow, more orange at the tip, extremities of casque black, base of lower mandible black; female with no black on casque; feet greenish black".

Total length ♂, 1100, 1155; ♀, 1030; wing ♂, 425, 470; ♀, 465; tail, ♂ 420, 400; ♀, 330; tarsus ♂, 72, 60; ♀, 58; bill from gape ♀, 247, 212; ♀, 207 mm.

Common everywhere along the coast, especially on certain of the islands.

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

201. *Anthracoceros albirostris* (Shaw & Nodder).

Buceros albirostris, Shaw & Nodder, Nat. Misc. xix, 1807, p. 809 (Chandernagore, Bengal).

Hydrociissa albirostris, A., p. 100 (Tavoy to Bankasoon); B., p. 47 (Junk Seylon).

Anthracoceros malabaricus, D., p. 70 (Patelung); E., p. 107 (Patani); F., p. 35 (Trang; Langkawi; Terutau);

Anthracoceros albirostris, G., p. 150 (Rathburi and Petchaburi); J., p. 150 (Langkawi); L., p. 96 (Ghirbi).

♂. Tung Pran, Takuatung, Peninsular Siam, 12 February 1919 (No. 3962).

♂, ♀. Hat Sanuk, near Koh Lak, S. W. Siam, 13-15 April 1919 (No. 5276, 5318).

"Iris red, orbits silvery tinged with blue; bill ivory and black; feet greenish grey or black."

Total length ♂, 747; ♀, 720; wing ♂, 285; ♀, 280; tail ♂, 285; ♀, 283; tarsus ♂, 44; ♀, 42; bill ♂, 139; ♀, 137 mm.

Specimens from the islands off Takuatung, and from Terutau and Langkawi as well as from Junk Seylon, are all small with the wing less than 265 mm., but judging from the casque are mostly juvenile. An adult male from Chong, Trang, is large, with the wing 308 mm., completely agreeing in this respect with *A. affinis* (Blyth) from the Himalayas. The birds do not appear to differ except in size: but Trang is so far from the range of *affinis* (Dehra Dun to Eastern Assam) that we hardly care to identify by that name an isolated specimen found at the farther extremity of the range of *albirostris*: nor, for the moment, do we use trinomials though we have little doubt that *affinis* is merely a subspecies of *albirostris*.

There is some doubt as to the application of the earlier name *Buceros malabaricus* Gmelin, so we do not use it here.

202. *Anthracoceros coronatus convexus* (Temm.).

Buceros convexus, Temminck, Pl. Col. 1831, pl. 530, (Java).

Anthracoceros convexus, D., p. 70 (Patani).

The southern form of the genus, reaching its northern limit in Patani.

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| A. Hume & Davison, Stray Feathers; vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905. |
| B. Müller, Die Ornis der Insel Salanga, 1882. | F. Robinson and Kloss, This, 1910-11. |
| C. Gales, Birds Brit. Burmah, Vols. i & ii, 1893. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

203. *Rhytidoceros undulatus* (Shaw).

Buceros undulatus, Shaw, Gen. Zool. viii, 1811, p. 26 (Java).

Rhytidoceros undulatus, A., p. 111 (Choungthanoung to Victoria Point); B., p. 48 (Junk Seylon); E., p. 36 (Terutau and Langkawi Ids.); J., p. 150 (Lontar Id.); L., p. 96 (Junk Seylon).

♂. Tapli, Pakchan, Peninsular Siam, 2 March 1919 (No. 4359).

♂. Tasan, Chumporn, Peninsular Siam, 19 March 1919 (No. 4692).

"Iris orange or red, orbit salmon or chrome; throat chrome with transverse band of blue or dark green; bill ivory, reddish at base; feet black."

Total length, ♂, 980, 1055; wing, 465, 502; tail, 350, 410; tarsus, 55, 62; bill from gape, 220, 210 mm.

204. *Rhytidoceros subruficollis* (Blyth).

Buceros subruficollis, Blyth, Journ. Asiat. Soc. Bengal, xii, 1843, p. 177 (vicinity of Moulmein, op. cit. x. 1841, p. 917).

Rhytidoceros subruficollis, A., p. 112 (Bankasoon); G., p. 150 (Ratburi and Petchaburi).

A low country form in the Malay Peninsula, *R. undulatus* keeping more to the hills.

205. *Anorhynchus galeritus* (Temm.).

Buceros galeritus, Temminck, Pl. Col., 1824, pl. 520 (Sumatra).

Anorhynchus galeritus, A., pp. 109, 500 (Nwalabo, Bankasoon); M., p. 435 (Tung Song, Peninsular Siam).

A hill country hornbill. We have a male from Khao Ram; 1200 ft., Nakon Sri Tamarat, March 1922.

Ptilolaemus tickelli tickelli (Blyth).

Buceros tickelli, Blyth, Journ. Asiat. Soc. Bengal, xxiv, 1855, p. 266 (Hills east of Moulmein).

Ptilolaemus tickelli, G., p. 150 (Sai Yoke, Ratburi, W. Siam, vide Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 26).

Will possibly occur just within our limits.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

206. *Berenicornis comatus* (Raffles).

Buceros comatus, Raffles, Trans. Linn. Soc. xiii, 1822, p. 399 (Sumatra).

Berenicornis comatus, A., pp. 106, 500 (Nwalabo and Bankasoon).

Rare everywhere, feeding on very high trees.

Male from Khao Ram, 1200 ft., and two from Khao Luang, 2000 ft., Nakon Sri Tamarat, all in March 1922—the two last being obtained by Mr. W. J. F. Williamson's collector.

207. *Rhinoplax vigil* (Forst.).

Buceros vigil, Forst., Ind. Zool., 1781, p. 40. (Tenasserim).

Rhinoplax vigil, A., p. 115 (Bankasoon).

Fairly common in heavy jungle in the Malay States, but never very easy to obtain.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S., 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

UPUPIDÆ.

HOOPUES.

Crest with a subterminal bar of white: larger

.. *Upupa epops saturata*.

Crest with no subterminal bar of white: smaller

Upupa epops longirostris.

208 *Upupa epops saturata* Lonnberg.

Upupa epops saturata, Lonnberg, Arkiv. för Zool. v, 1909, No. 9, p. 29 (Kjächta); I., p. 111 (Koh Kak); K., p. 93 (Perak).

This form is insufficiently known, but the local occurrence rests on two birds, one from Perak, the other from Koh Lak, both shot in winter and possibly migrants.

209. *Upupa epops longirostris* (Jerd.).

Upupa longirostris, Jerdon, Birds India, i, 1862 p. 393 (Burma).

Upupa longirostris, A., p. 202 (Pakchan); B., p. 43 (Junk Seylon);

C. ii p. 63 (Tenasserin; Junk Seylon).

Upupa indica, E., p. 108 (Patani); F., p. 34 (Trang); G., p. 150 (Ratburi and Petchaburi); H., p. 145 (Koh Samui.)

Upupa epops longirostris, I., p. 111 (Koh Lak); K., p. 62 (Koh Lak; Patani); L., p. 95 (Pulau Panjang); Williamson, Journ. N. H. S. Siam, ii, 1917, p. 339 (Bangkok; S. W. and Peninsular Siam).

♂, ♀. Mamok, Pakchan, Peninsular Siam, 27-28 February 1919 (Nos. 4300, 4305.)

2 ♂, 2 ♀. Namchuk, Pakchan, Peninsular Siam, 25-26 February 1919 (Nos. 4215, 4216, 4246, 4262).

♂. Tapli, Pakchan, Peninsular Siam, 8 March 1919 (No. 4508).

2 ♂. Koh Lak, S. W. Siam, 1-9 April 1919 Nos. 4878, 5209).

♂. Kandhuli, Chaiya, Peninsular Siam, 21 September 1919, E. Seimund (C.).

"Iris dark; bill black, corneous at base; feet grey."

Total length ♂, 317, 315, 280, 308, 290; ♀, 283, 300, 288; wing ♂, 145, 137, 145, 147, 142 (dry), 132 (yg.); ♀, 131, 133 130; tail ♂, 113, 108, imp. 106, 103; ♀, 98, 105, 98; tarsus ♂, 24, 24, 23, 23, 23; ♀, 20, 23, 21; bill from gape ♂, 70, 68, 70, 72, 50 (dry); ♀, 54, 55, 51 mm.

Males, as shown by this series, are larger than females, with considerably longer bills, which however seem to be much affected by wear.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

MEROPIDÆ.

BEE-EATERS.

1	{ Central tail feathers elongated	2
	{ Tail square, central tail feathers not elongated	4
2	{ Head chestnut	<i>Merops viridis.</i>
	{ Head not chestnut	3
3	{ Wing 4 inches or under	<i>M. orientalis birmanus.</i>
	{ Wing 5 inches or over	<i>M. superciliosus javanicus.</i>
4	{ Larger, breast plumes elongate	5
	{ Smaller, breast plumes normal	<i>Melittophagus c. erythrocephalus.</i>
5	{ Breast plumes blue	<i>Nyctiornis athertoni.</i>
	{ Breast plumes vermilion	<i>N. amictus.</i>

210. *Merops viridis* Linn.

Merops viridis, Linn., Syst. Nat. i, 1766, p. 182 (Java); J., p. 151 (Langkawi);

Merops sumatranus, D., p. 69 (Patani); E., p. 109 (Patani); F., p. 37 (Peninsular Siam and Langkawi); H., p. 92, 142 (Pandon, Koh Samui and Koh Pennan).

2 ♂, ♀. Koh Lak, S. W. Siam, 2-4 April 1919 (Nos. 4943, 5010, 5019).

"Iris carmine; bill black; feet brownish black."

Total length ♂, 286, 302; ♀, 258; wing ♂, 110, 112; ♀, 108; tail (middle feathers) ♂, 165, 142; ♀, 130; tail (outer feathers) ♂, —, —; ♀, 80; tarsus ♂, 12, 11; ♀, 11; bill from gape ♂, 45, 44; ♀, 44 mm.

Mr. W. J. F. Williamson has examples from Chumporn and Bangtaphan.

It is curious that this bird should, so far as is known to date, not occur in Tenasserim, while it is found on the other side of the range at the above locality and also in Eastern Siam and French Indo-China. The species is, at all events, partially migratory, but less so than *M. javanicus*, though in the more southern parts of its range it may be met with throughout the year.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

211. *Merops orientalis birmanus* Neumann.

Merops viridis (nec Linn.), A., p. 67 (Tavoy and Mergui).

Merops viridis burmanus, Neumann, Ornith. Monatsb. xviii, 1910, p. 80 (Myingan, Irawadi).

Merops orientalis burmanus, Hartert, Vog. Palaarkt. Faun. ii, 1912, p. 864; I., p. 110 (Koh Lak).

Merops lamark burmanus, K., p. 93 (Koh Lak).

3 ♂, 4 ♀. Koh Lak, S. W. Siam, 2-8 April 1919 (Nos. 4941, 4942, 5954-5, 5060, 5072, 5179).

"Iris carmine; bill black; feet greyish brown or brownish."

Total length ♂, 187, 191, 138; ♀, 220, 222, 232, 213; wing ♂, 96, 97, 93; ♀, 91, 88, 92, 91; tail ♂, 77, 77, 128; ♀, 112, 112, 124, 103; tarsus ♂, 11.5, 11, 9.5; ♀, 11, 9, 9.5, 10; bill from page ♂, 33 (app.), 35, 35; ♀, 29, 30, 30 (app.), 32 mm.

These specimens are all in rather worn plumage, but in all the top of the head is more or less rich rufescent brown washed with green, thus conforming to Neumann's diagnosis. In several the bill is damaged or worn at the tip, which is probably due to the use of the bill for excavating nesting holes.

The species was very abundant at Koh Lak, in open country in the vicinity of the sea; we did not see it further south, and it certainly does not occur at Chumporn where we were specially on the look out for it. It has been taken by Williamson's collectors at Petchaburi and also at Nong Khae, in S. W. Siam.

212. *Merops superciliosus javanicus* Horsf.

Merops javanicus, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 171 (Java).

Merops philippinus, A., p. 67, 498 (Bankasoon); B., p. 44 (Junk Seylon); E., p. 109 (Trang; Terutau Id.); G., p. 150 (Ratburi and Petchaburi); H., p. 146 (Koh Samui and Koh Pennan); J., p. 152 (Terutau Id.); K., p. 94 (Koh Lak); Williamson, Journ. Nat. Hist. Soc. Siam ii, 1917, p. 328 (Bangkok; Peninsular Siam).

♂. Tapli, Pakchan Estuary, Peninsular Siam, 6 March 1919 (No. 4447).

♂. Tasan, Pakchan Estuary, Peninsular Siam, 15 March 1919 (No. 4614).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

"Iris red; bill black; feet black or purplish black."

Total length, —, 302; wing, 136, 133; tail, —, 154; tarsus, 13, 11; bill from gape, 58, 42 mm.

Apparently nowhere very common in the more northern parts of the Peninsula.

213. *Melittophagus erythrocephalus erythrocephalus* (Gm.).

Merops erythrocephalus, Gmelin, Syst. Nat. i, 1788, p. 463 (Ceylon).

Merops leschenaulti, A., p. 68 (Tavoy to Bankasoon).

Melittias quinticolor, B., p. 44 (Junk Seylon).

Melittophagus swinhoei, E., p. 109 (Patani); F., p. 36 (Trang and Langkawi); H., p. 92 (Bandon); J., p. 152 (Terutau Id.); L., p. 96 (Ghirbi; Junk Seylon; Pulau Panjang).

We did not collect this Bee-eater on the present expedition, though, curiously enough, Davison notes that he came across immense numbers up the head waters of the Pakchan. In the southern parts of Peninsular Siam, and on Langkawi and Terutau Islands, it is very abundant during the winter months. It is found, though sparingly, in Penang and extends south as far as Parit on the Perak river, where large flocks were met with in September 1911.

214. *Nyctiornis athertoni* Jard. & Selby.

Nyctiornis athertoni, Jard. & Selby, Ill. Orn. ii, 1828, pl. 58 (Cachar); L., p. 111 (Koh Lak).

♀. Hat Sanuk, nr. Koh Lak, S. W. Siam, 15 April 1919 (No. 5266).

"Iris bronze; bill black, whitish at base; feet sage green."

Total length 345; wing 138; tail 135; tarsus 20; bill from gape 51 mm.

The above locality, in the neighbourhood of which Gyldenstolpe also secured two specimens, is considerably the most southerly recorded from Siam, though the species reaches a similar latitude in French Indo-China. The more bluish tint of the crown, noted on birds from north Siam by Gyldenstolpe, is probably the result of wear: it is very marked on the whole upper surface of our bird, which is in very worn plumage.

A. Hume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Inselalanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

215. Nyctiornis amictus (Temm.).

Merops amictus, Temm. Pl. Col. iv, 1824. pl. 310 (Bencoolen, Sumatra).

Nyctiornis malaccensis, Cab. and Heine, Mus. Hein. ii, 1860, p. 133 (Malacca: female).

Nyctiornis amicta, A., p. 69, 498 (Malewoon); F., p. 37 (Trang); G., p. 150 (Ratburi and Petchaburi); H., p. 92 (Bandon); L., p. 97 (Ghirbi).

♂. Renong river, Peninsular Siam, 22 February 1919 (No. 4160).

♀. Mamok, Pakchan Estuary, Peninsular Siam, 28 February 1919 (No. 4313).

♂, ♀. Tasan, Chumporn, Peninsular Siam, 14-22 March 1919 (No. 4582, 4771).

"Iris orange; bill black, whitish at base; feet pale green grey."

Total length ♂, 333, 323; ♀, 320, 308; wing ♂, 133, 124; ♀, 121, 123; tail ♂, 130, 117; ♀, 123, 120; tarsus ♂, 15, 15; ♀, 16, 16; bill from gape ♂, 60, 57; ♀, 49.5, 55 mm.

Examination of these and many others from various parts of the Malay Peninsula, Sumatra and Borneo shows that all but the adult males have some small trace of scarlet on the feathers of the forehead, which appears to be lost by a direct change to mauve or lilac, as many feathers are mauve at the tips with scarlet near the shaft.

Mr. Gairdner's record seems the most northerly for Siam; but on the Burmese frontier it has been obtained at Myawadee, 65 miles N. by E. of Moulmein. In the southern parts of Peninsular Siam it is a very common forest bird.

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part.). |

CAPRIMULGIDÆ.

GOATSUCKERS OR NIGHT-JARS.

1	{ Gape with bristles	2
	{ Gape with no bristles	<i>Lyncornis c. cervineiceps</i>
2	{ Four outer pairs of tail feathers with white tips	3
	{ Two outer pairs of tail feathers with white tips	4
3	{ Wing more than 8 inches	<i>Caprimulgus indicus jotaka</i>
	{ Wing less than 8 inches	<i>C. indicus innominatus</i>
4	{ Wing 6 inches or under	<i>C. asiaticus</i>
	{ Wing 7 inches or over	<i>C. macrurus ambiguus</i>

216. *Lyncornis cervineiceps cervineiceps* Gould.

Lyncornis cervineiceps, Gould, Icon, Av. pt. 11, 1838, pl. 14 (China or adjacent Islands! type locality here fixed as province of Trang, Peninsular Siam): A., p. 60 (Pabyin; Bankasoon: Tongka); F., p. 38 (Trang); G., p. 150 (Ratburi and Petchaburi): L., p. 107 (Hat Sanuk); L., p. 97 (Junk Seylon): Hume, Stray Feathers, ix, 1880, p. 120. (Kasoon; Pangga).

♂. Kandhuli, Chaiya, Peninsular Siam, 14 September 1919, E. Seimund (C).

♀. Tung Pran, Takuatung, Peninsular Siam, 13 February 1919 (No. 3968).

"Iris dark; bill pinkish horn, culmen black; feet brownish horn."

Total length ♀, 405; wing ♂, 305; ♀, 323; tail ♀, 230; tarsus ♀, 18; bill from gape ♀, 29.5 mm.

Fairly common all over Peninsular Siam, except the Monthon of Patani.

217. *Caprimulgus indicus innominatus* Hume (?).

Caprimulgus innominata, Hume, Stray Feathers, iii, 1875, p. 318, note (Choungthanoung, Tenasserim).

Caprimulgus jotaka, A., p. 56 (Choungthanoung, Bankasoon?).

Caprimulgus indicus jotaka, J., p. 153 (Terutau Id.).

Specimens from Terutau Island, Annam and Hainan tend to show that Indo-China possesses a small dark resident race of this goatsucker (analogous to *C. i. kelaarti*, of Ceylon and South India), which is best recorded under Hume's name as above.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1906.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

218. *Caprimulgus indicus jotaka* Temm. & Schleg.

Caprimulgus jotaka, Temm. & Schleg., Fauna Japon., Aves, 1847, p. 37, pl. 12 (Japan) ; F., p. 37 (Trang).

Caprimulgus indicus jotaka, J., p. 153 (Langkawi).

On the coasts and islands of the western side of Peninsular Siam this migratory species is not uncommon during the winter months.

219. *Caprimulgus asiaticus* Latham.

Caprimulgus asiaticus, Latham, Ind. Orn. ii, 1790, p. 588 (India, Bombay) ; G., p. 150 (Ratburi and Petchaburi) ; L., p. 109 (Koh Lak) ; K., p. 97 (Koh Lak).

Not known south of Koh Lak.

220. *Caprimulgus macrurus ambiguus* Hartert.

Caprimulgus macrurus ambiguus, Hartert, Ibis, 1896, p. 373 (Malay Peninsula ; Burma ; Assam ; Eastern Himalayas) ; K., p. 94 (Koh Lak. Type locality restricted to South Tenasserim) ; L., p. 97 (Junk Seylon).

Caprimulgus macrurus, A., p. 58, 498 (Tavoy to Malewoon) ; B., p. 51 (Junk Seylon and Malay Peninsula) ; E., p. 107 (Patani).

Caprimulgus ambiguus, F., p. 37 (Trang).

Caprimulgus macrurus bimaculatus, L., p. 109 (Hue Sai and Hat Sanuk) ; J., p. 153 (Langkawi) ; M., p. 436 (Klong Wong Hip, Peninsular Siam).

♀. Koh Rah, Takuapah, Peninsular Siam, 16 February 1919 (No. 4075).

♂, ♀. Tapli, Pakchan, Peninsular Siam, 2-3 March 1919 (Nos. 4354, 4398).

"Iris dark ; bill blackish ; feet pinkish brown."

Total length ♂, 287 ; ♀, 273, 277 ; wing ♂, 198 ; ♀, 193, 189 ; tail ♂, 153 ; ♀, 135, 145 ; tarsus ♂, 18 ; ♀, 14, 16. 5 ; bill from gape ♂, 34 ; ♀, 31, 34 mm.

Much has been written on the races of this widespread goat-sucker, which it is unnecessary to repeat here. It appears to be fairly well established that three races exist on the Asiatic continent, viz.,

C. macrurus albonotatus, Tickell, Journ. Asiat. Soc. Bengal,

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F.M.S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

ii, 1833, p. 580 (Bengal). A larger and paler form, not found in the area dealt with here.

C. macrurus ambiguus, Hartert, Ibis, 1896, p. 373. An intermediate race ranging south to about 6° or 7° N. Lat.

C. macrurus bimaculatus, Peale, U. S. Explor. Exped. viii, 1848, p. 170 (Singapore.) A smaller darker race found in the southern third of the Malay Peninsula.

Note. *Caprimulgus m. anamensis* Oberholser (Proc. U. S. Nat. Mus. xlviii, 1915, p. 593, Tanjong Katong, Singapore) is a pure synonym of the last.

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| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905. |
| B. Müller, Die Ornis der Insel Salanga, 1882. | F. Robinson and Kloss, Ibis, 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1893. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

APIDÆ.

SWIFTS.

1	{ Shafts of tail feathers stiff, ending in bare points	4
	{ Shafts of tail feathers normal	2
	{ Tail very deeply forked ; crested or with ornamental plumes on the head ;	
	{ sexes somewhat different	5
2	{ Tail even, or at any rate not deeply forked ; not crested or with ornamental	
	{ plumes on the head ; sexes similar	3
	{ All four toes directed forwards	6
3	{ Two toes directed forwards, two backwards	
	{ Three toes directed forwards, one backwards	7
	{ Wing over 7 inches	<i>Chaetura gigantea indica</i>
4	{ Wing under 5 inches	<i>C. leucopygialis</i>
	{ Eyebrow and moustachial plumes white	<i>Hemiprocne c. comata</i>
5	{ Eyebrow and moustachial plumes not white	<i>H. longipennis harterti</i>
	{ Abdomen with white tips to feathers	<i>Apus p. pacificus</i>
6	{ Abdomen uniform blackish	<i>A. affinis subfurcatus</i>
	{ Upper surface steel blue ; belly with white	
7	{ edgings to feathers	<i>Collocalia linchi elachyptera</i>
	{ Upper surface sooty brown ; belly without white edgings to feathers	8
	{ Wing 5 inches or more	<i>C. innominata</i>
8	{ Wing less than 5 inches	<i>C. francica germani</i>

Collocalia linchi elachyptera Oberh.

Collocalia linchi elachyptera, Oberholser, Proc. Acad. Nat. Sci. Philad. 1906, p. 207 (Bentinck Id., Mergui Archipelago).
Collocalia linchi, Blyth, Birds of Burma, p. 35 (Mergui Arch.).

Certain to occur in the neighbourhood of the Pakchan Estuary within Siamese territory, though no specimens are actually on record.

Collocalia innominata Hume.

Collocalia innominata, Hume, Stray Feathers, i, 1873, p. 294 (South Andaman Id.) ; A, p. 49 (Mergui and Bankasoon) ; J., p. 154.
Collocalia maxima (nomen nudum), Hume, Stray Feathers, iv, 1876, p. 223 (Mergui and Bankasoon).

This large Cave-Swiftlet will probably be found abundant on many of the islands on both coasts of Peninsular Siam.

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- I.** Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. **M.** Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
J. Robinson, Journ. F. M. S. Mus. vii, 1917. Baker, Journ. N. H. Soc. Siam, iii, 1919.
K. Kloss, Ibis, 1918. (second part).
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. **M. I.** Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

221. *Collocalia francica germaini* Oust.

Collocalia germaini, Oustalet, Bull. Soc. Philom., 1876, p. 1 (Pulo Condor).

Collocalia spodopygia, A., p. 51 (Mergui to Bankasoon); C. ii, p. 8. (Mergui Arch., south of Tavoy).

Collocalia merguensis, H., p. 146 (Koh Samui and Koh Pennan).

Collocalia francica germaini, I., p. 106 (Koh Lak); J., p. 154 (Lontar Id.).

We found this swiftlet numerous on Koh Samui and Koh Pennan in the Bandon Bight. Specimens from these islands and from Pulau Condor, the typical locality, have been submitted to Dr. Hartert and pronounced to be identical. We have seen a specimen of Williamson's from Langsuan, taken in October 1921.

222. *Chaetura gigantea indica* Hume.

Chaetura indica, Hume, Stray Feathers, i, 1873, p. 471 (Southern India); A., p. 46 (Bankasoon, Malewoon); Hartert, Cat. Birds Brit. Mus. xvi, p. 476 (Salanga or Junk Seylon).

Chaetura gigantea, A., p. 46 (Malewoon; cf. Hartert, Cat. Birds Brit. Mus. xvi, p. 475).

Hirundinapus gigantea, C. ii, p. 5 (Malewoon).

We have not seen specimens of this race from S. W. or Peninsular Siam, but it is an occasional straggler as far south as Selangor. Intermediate forms also occur.

Chaetura leucopygialis (Blyth).

Acanthylis leucopygialis, Blyth, Journ. Asiat. Soc. Bengal, xviii, 1849, p. 809 (Penang).

Chaetura coracina, A., p. 45 (Choungthanoung; Pakchan).

Rhipidura leucopygialis, C. ii, p. 6 (S. Tenasserim).

Probably common, but hard to obtain.

223. *Apus pacificus pacificus* (Lath.).

Hirundo pacifica, Latham, Ind. Orn. Suppl., 1801, p. lviii (New South Wales).

Cypselus pacificus, A., p. 48 (Bankasoon); H., p. 146 (Koh Pennan).

♂. Kandhuli, Chaiya, Peninsular Siam, 12 September 1919, E. Seimund (C).

Wing 175 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1893.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

We are unable to say if the darker form described by the late Col. Harington as *C. p. cooki* from the Northern Shan States (Bull. Brit. Orn. Club, xxxi, 1913, p. 57: Goteik, N. Shan States) occurs in Peninsular Siam; the probabilities are that it does, as we have one specimen closely agreeing with the description, shot on the summit of Kedah Peak in December 1915.

224. *Apus affinis subfurcatus* Blyth.

Cypselus subfurcatus, Blyth, Journ. Asiat. Soc. Bengal, xviii, 1849 p. 807 (Penang); A., p. 47 (Malewoon); J., p. 155 (Koh Muk, Trang).

Apus affinis subfurcatus, I., p. 107 (Koh Lak).

The common House-Swift in Peninsular Siam.

225. *Tachornis batassiensis infumatus* (Sel.).

Cypselus infumatus, Selater, P. Z. S. 1865, p. 602 (Borneo); A., p. 48 (Mergui to Malewoon).

Tachornis infumatus, E., p. 107 (Patani); F., p. 38 (Trang); H., p. 146 (Koh Samui); I., p. 107 (Koh Lak); Hartert, Cat. Birds Brit. Mus. xvi, 1892, p. 468 (Kossoom and "Poonya" Pangnga?).

Common among the Lontar Palms (*Borassus flabellifer*) wherever they occur.

226. *Hemiprocne longipennis harterti* Stres.

Hemiprocne longipennis harterti, Stresemann, Nov. Zool. xx, 1913, p. 339 (Deli, Sumatra).

Dendrochelidon longipennis, A., pp. 52, 498 (Nwalabo to Malewoon).

Macropteryx longipennis, F., p. 38 (Trang).

227. *Hemiprocne comata comata* (Temm.).

Cypselus comata, Temminck, Pl. Col., 1824, pl. 268 (Sumatra).

Dendrochelidon comata, A., p. 51 (Choungthanoung to Malewoon).

Macropteryx comata, F., p. 38 (Trang).

Both these Tree-Swifts are common, especially on the banks of the larger rivers in jungle country.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam. iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).
M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.
(third part).

TROGONIDAE.

TROGONS.

1	{ Abdomen yellow or orange yellow ..	<i>Pyrotrogon oreskios uniformis</i>	
	{ Abdomen brown or buffy brown ..	.. ..	2
	{ Abdomen red or pink ..	.. ..	3
2	{ Breast and abdomen uniform dark brown	<i>P. orrophæus</i> , ♀	..
	{ Breast brownish grey, abdomen buffy brown	<i>P. kasumba</i> , ♀	..
3	{ Smaller, wing less than 5 inches ..	.. ..	4
	{ Larger, wing more than 5 inches ..	.. ..	6
4	{ Head and throat brown, abdomen pink ..	<i>P. duvauceli</i> , ♀	..
	{ Head and throat black, abdomen red ..	.. ..	5
5	{ Rump scarlet ..	<i>P. duvauceli</i> , ♂	..
	{ Rump light brown ..	<i>P. orrophæus</i> , ♂	..
6	{ Outer tail-feathers partly white speckled with black ..	.. ..	7
	{ Outer tail-feathers partly uniform white ..	.. ..	8
7	{ Head and breast black, nape pink ..	<i>P. neglectus sumatranus</i> , ♂	
	{ Head, breast and nape brown ..	<i>P. n. sumatranus</i> , ♀	
8	{ Head and breast black, a red nape-band ..	<i>P. kasumba</i> , ♂	
	{ Head, breast and nape dull red ..	<i>P. e. erythrocephalus</i> , ♂	
	{ Head, breast and nape brown ..	<i>P. e. erythrocephalus</i> , ♀	

228. *Pyrotrogon kasumba* Raffles.

Trogon kasumba, Raffles, Trans. Linn. Soc. xiii, 1821, p. 282 (Sumatra).

Two males obtained by Mr. W. J. F. Williamson's collector at Bangnara, Patani, 10 - 14 July, 1916, constitute the first record for this species in Siam.

Pyrotrogon erythrocephalus erythrocephalus (Gould).

Trogon erythrocephalus, Gould, P. Z. S. 1834, p. 25 (near Rangoon).

Harpactes erythrocephalus, C. ii, p. 99 (Muleyit); E., p. 106 (Perak-Pahang boundary).

Pyrotrogon erythrocephalus, I., p. 105 (North Siam).

This is one of the commonest mountain trogons in the Malay States and will certainly be found eventually in the Siamese portions of the Peninsula. Oates states that it is abundant in Pegu, where it is commonest in the hills, and Gyldenstolpe obtained several examples in North Siam.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salangka, 1882.
C. Oates, Birds Brit. Borneo, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

229. *Pyrotrogon diardi sumatranus* (Blasius).

Harpactes diardi sumatranus, Blasius, Mitt. d. Geogr. Ges. u. d. Naturh. Mus. zu L. beck, ii Reihe, Heft x, 1896, p. 95 (Sumatra and Malay Peninsula).

Pyrotrogon diardi, B., p. 61 (Malay Peninsula).

Pyrotrogon diardi neglectus, M., p. 438 (Tung Song, Peninsular Siam)

♀. Khao Luang, Nakorn Sri Tamarat, 2,000 ft., Peninsular Siam, 15 March 1922.

Müller's male from the Malay Peninsula probably came from the vicinity of Junk Seylon: and we obtained in 1909 another from Chong, Trang, Peninsular Siam.

Blasius's name antedates *neglectus* of Forbes and Robinson; but was published so inconspicuously that it was overlooked until attention was drawn to it by Snoukaert van Schauberg (Ibis, 1922, p. 665).

230. *Pyrotrogon oreskios uniformis* Robinson.

Pyrotrogon oreskios uniformis, Robinson, Journ. F. M. S. Mus. vii, 1917, p. 149 (Trang and Kedah, also Langkawi and Terutau Ids.); L., p. 97 (Junk Seylon).

Harpactes oreskios, A., pp. 66, 498 (Tavoy to Victoria Point); G., p. 150 (Ratburi and Petchaburi); O. Grant, Cat. Birds Brit. Mus. xvii, p. 495 (Tavoy to Victoria Point; Meklong, Siam).

Pyrotrogon oreskios, E., p. 106 (Patani); F., p. 39 (Trang and Langkawi Id.); H., p. 92 (Bandon); I., p. 105 (Koh Lak).

Orescius gouldi, B., p. 61 (Junk Seylon).

♂. Renong river, Peninsular Siam, 21 February 1919 (No. 4148).

3 ♂. Tasan, Chumporn, Peninsular Siam, 16 - 28 March 1919 (Nos. 4619, 4747, 4908).

♂. Khao Luang, Nakorn Sri Tamarat, 3,000 ft., Peninsular Siam, 25 March 1922.

"Iris grey; orbits and base of bill smalt, culmen black; feet pale grey."

Total length ♂, 292, 285, 285; wing 123, 122, 122; tail 167, 172, 173; tarsus 12, 12, 13; bill from gape 24, 22, 25 mm.

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

- Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

The Southern Malay Peninsula birds differ very slightly in having the bars on the secondaries and wing coverts rather closer together in both sexes than in the northern form. Both differ from the typical Javan bird in having the rump uniform chestnut without any wash of zanthine orange.

The species is generally distributed throughout the area under consideration, where it is, broadly speaking, very much commoner than it is in the more Southern Malay districts.

231. *Pyrotrogon orrophæus* Cab. & Heine.

Pyrotrogon orrophæus; Cab. & Heine, Mus. Hein., Th. iv, 1863, p. 156 (Malacca); B., p. 60 (Malay Peninsula).

The specimen recorded by Müller from the Malay Peninsula probably came from the neighbourhood of Junk Seylon. The most northerly example of *P. orrophæus* obtained by us is one from a few miles north of Taiping in Perak: it is apparently a very rare bird in the Malay States.

232. *Pyrotrogon duvauceli* (Temm.).

Trogon duvauceli, Temminck, Pl. Col., 1824, pl. 291 (Sumatra).

Harpactes duvauceli, A., pp. 63, 498 (Nwalabo to Malewoon); E., p. 106 (Patani); M. p. 437 (Tung Song, Peninsular Siam).

2 ♂. Tazan, Chumporn, Peninsular Siam, 22 - 28 March 1919 (Nos. 4785, 4914).

"Iris dark; supraorbital region silvery cobalt, infraorbital white; bill smalt, deeper at gape, culmen black; feet purplish."

Total length 225, —; wing 103, —; tail 133, —; tarsus 10, —; bill from gape 23, — mm.

We can see no tangible differences between Northern Malay, Southern Malay, Sumatran and Bornean birds; but our series from the two latter regions is poor.

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Inselalanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

CUCULIDAE.

CUCKOOS.

1	{ Head crested	<i>Clamator coromandus</i>	2
	{ Head not crested .. .. .	.. .. .
2	{ Tarsus feathered anteriorly; wing pointed and longer than tail .. .. .	.. .. .	3
	{ Tarsus naked; wing rounded and about equal to tail	<i>Endynamis s. malayana</i>	18
	{ Tarsus naked; wing rounded and shorter than tail .. .. .	.. .. .
3	{ Secondaries scarcely exceeding half the length of wing .. .. .	.. .. .	4
	{ Secondaries two thirds the length of wing or more .. .. .	.. .. .	5
4	{ No subterminal black band on tail	<i>Cuculus canorus bakeri</i>	
	{ A subterminal black band on tail	<i>C. m. micropterus</i>	
5	{ Tail square or forked; plumage black	<i>Surniculus lugubris dicruroides</i>	
	{ Tail rounded and graduated; plumage not black .. .. .	.. .. .	6
6	{ Larger, wing more than 5.5 inches; tail with 3 or 4 black bars .. .. .	.. .. .	7
	{ Smaller, wing not more than 5 inches; tail with no bars or with many .. .. .	.. .. .	10
7	{ Wing less than 6 inches: a distinct dark malar stripe	<i>Hierococcyx nanus</i>	
	{ Wing more than 6 inches: no distinct dark cheek stripe .. .. .	.. .. .	8
8	{ Abdomen never banded: back in adults blackish grey: wing 6.7 to 7.5 inches	<i>H. fugax nasicolor</i>	
	{ Abdomen transversely banded in adults .. .. .	.. .. .	9
9	{ Wing 7 to 8 inches: back in adults ashy grey	<i>H. varius</i>	
	{ Wing over 8.5 inches: back in adults brown	<i>H. sparverioides</i>	
10	{ Ground colour of throat not white .. .. .	.. .. .	11
	{ Throat whitish with dark cross-bars .. .. .	.. .. .	12
11	{ Fore neck rufous like the abdomen: head like the back, generally bronzed; white on inner webs of tail-feathers confined to the edge	<i>Cacomantis s. sepulchralis</i>	
	{ Fore neck grey contrasting with abdomen: head grey, paler than the back; white on inner web of tail-feathers extending to, or near, the shafts	<i>C. merulinus querulus</i>	
12	{ Upper parts always barred: not metallic	<i>Penthoceryx sonnerati venustus</i>	
	{ Upper parts unbarred in adults: metallic .. .. .	.. .. .	13
13	{ Upper parts entirely or partly deep purple	<i>Chalcococcyx xanthorhynchus</i> , ♂	
	{ No purple above .. .. .	.. .. .	14
14	{ Head rufous .. .. .	.. .. .	15
	{ Head not rufous .. .. .	.. .. .	16
15	{ Back, wings and tail barred rufous and green or greenish bronze: upper mandible dark throughout	<i>C. xanthorhynchus</i> , imm.	
	{ Back, wings and tail entirely coppery green: upper mandible pale at base	<i>C. maculatus</i> , ♀	
16	{ Upper parts deep shining green: upper mandible pale at base	<i>C. maculatus</i> , ♂	
	{ Upper parts not intense green: upper mandible entirely dark .. .. .	.. .. .	17

- I.** Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. **M.** Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
J. Robinson, Journ. F. M. S. Mus. vii, 1917. Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
K. Kloss, Ibis, 1918. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. **M. I.** Baker, Journ. N. H. Soc. Siam, iii, 1919. (third part).

17.	{ Greenish bronze above; much white on forehead: little chestnut in tail	<i>C. m. malayanus</i> , ♂, ♀	
	{ Coppery green above; little or no white on forehead: much chestnut in tail	<i>C. xanthorhynchus</i> , ♀ ad.	
18.	{ Claws of all toes similar .. .. .	.. .. .	19
	{ Claw of hind toe very long and nearly straight .. .. .	.. .. .	24
19.	{ Bill red throughout; general colour above grey	<i>Zanclostomus javanicus pallidus</i>	
	{ Bill wholly or partly green .. .. .	.. .. .	20
20.	{ Culmen almost straight, back ferruginous	<i>Rhinortha c. chlorophæa</i>	
	{ Culmen much curved throughout, back metallic green .. .. .	.. .. .	21
21.	{ Tail-feathers tipped chestnut	<i>Phoenicophæa c. erythronathus</i>	
	{ Tail-feathers tipped white .. .. .	.. .. .	22
22.	{ Abdomen chestnut	<i>Rhopodytes sumatranus</i>	
	{ Abdomen not chestnut .. .. .	.. .. .	23
23.	{ Wing 6 inches or more, abdomen grey	<i>R. tristis longicaudatus</i>	
	{ Wing about 5 inches, abdomen blackish	<i>R. diardi</i>	
24.	{ Wing about 5.5 inches, under wing-coverts chestnut	<i>Centropus bengalensis javanicus</i>	
	{ Wing about 8 inches, under wing-coverts not chestnut	<i>C. sinensis intermedius</i>	

233. *Clamator coromandus* (Linn.).

Cuculus coromandus, Linn., Syst. Nat. i, 1766, p. 171 (Coromandel).

Coccyzus coromandus, B., p. 54 (Junk Seylon); F., p. 39 (Trang and Langkawi); J., p. 158 (Langkawi, Terutau and Telibon Ids.).

Not uncommon in the winter months over the whole of the Malay Peninsula.

234. *Surniculus lugubris dicruroides* (Hodgs.).

Pseudornis dicruroides, Hodgson, Journ. Asiat. Soc. Bengal, viii, 1839, p. 136, pl. (Nepal).

Cucangulus lugubris, B., p. 52 (Junk Seylon).

Surniculus lugubris dicruroides, J., p. 156 (Langkawi, Terutau, Telibun and Lontar Ids.; Trang; Perlis); K., p. 97 (Koh Lak); L., p. 97 (Junk Seylon; Ghirbi).

♀. Koh Lak, S. W. Siam, 2 April 1919. [No. 4946].

"Iris dark hazel; bill black; feet purplish grey."

Total length 250; wing 138; tail 134; tarsus 15.5; bill from gape 24.5 mm.

Adult birds from Khao Luang, Nakorn Sri Tamarat, have the wings 144, 138, 140, 126 mm., the last showing an approach to *S. l. brachyurus*.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. I & II, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gardner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Practically all the specimens from Siam examined by us have been definitely referable to this northern form: it is probable, however, that lowland specimens from Patani will prove to belong to the smaller southern Malayan race, *S. l. brachyurus* Stresemann (Nov. Zool. xx, 1913, p. 340).

235. *Hierococcyx sparverioides* (Vig.).

Cuculus sparverioides, Vigors, P. Z. S. 1831, p. 173 (Himalayas).

Hierococcyx sparverioides, F., p. 40 (Trang); J., p. 159 (Langkawi and Lontar Ids.); L., p. 98 (Ghirbi and Pulau Panjang).

Presumably a winter visitor only. Not recorded from S. Tenasserim or any part of Siam other than the Peninsula.

236. *Hierococcyx varius* (Vahl).

Cuculus varius, Vahl., Skriv. Nat. Selsk., iv, 1797, p. 61 (India.)

Hierococcyx varius, Christiani in Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 61 (S. W. Siam).

A female obtained by Mr. C. J. Aagaard at Hua Hin on 14th, April 1914, is the only record for Siam.

237. *Hierococcyx fugax nasicolor* (Hodgs.).

Cuculus nasicolor, Blyth, Journ. Asiat. Soc. Bengal, xii, 1843, p. 943 (Nepal).

Hierococcyx nasicolor, F., p. 40 (Trang); H., p. 93 (Bandon); J., p. 159 (Terutau Id.).

Probably a winter visitor only: it is common as a migratory bird in the Straits of Malacca in October and November.

A nearly adult pair were obtained on Khao Luang, Nakorn Sri Tamarat, in March 1922.

238. *Hierococcyx nanus* Hume.

Hierococcyx nanus, Hume, Stray Feathers, v, 1877, p. 490 (Bankasoon); A., p. 157, 502 (Tavoy to Bankasoon); B., p. 53 (Junk Seylon).

Hierococcyx fugax nanus, M., p. 438 (Maprit, Peninsular Siam).

A rare and possibly resident form: we have a few specimens from various parts of the Malay Peninsula. Stuart Baker in claiming the Maprit bird as a record for Siam has overlooked Müller's

Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
56, No. 2, 1916.
J. Robinson, Journ. F. M. S. Mus. vii, 1917
K. Kloss, Ibis, 1918.
L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.
(second part).
M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.
(third part).

specimen from Junk Seylon. We do not think it advisable to regard this bird as a subspecies of the widespread *H. fugax*, forms of which also occur in the district.

239. *Cuculus micropterus micropterus* Gould.

Cuculus micropterus, Gould, P. Z. S. 1837, p. 137 (Himalayas); A., p. 156 (near Mergui); D., p. 74 (Patani); E., p. 40 (Trang; Langkawi); J., p. 159 (Langkawi).

Cuculus striatus, B., p. 54 (Junk Seylon).

Fairly common in winter.

240. *Cuculus canorus bakeri* Hartert.

Faun. Pal. Vog. ii, 1912, p. 948 (Shillong).

♂ vix ad. Koh Lak, S. W. Siam, 6 April 1919 (No. 5123).

"Iris brown, orbital ring chrome; bill yellowish, black on culmen, reddish at base; feet pale yellow."

Total length 332; wing 198; tail 172; tarsus 19; bill from gape 28 mm.

It seems most convenient to refer this bird to the Assamese race. It has nothing to do with *C. micropterus*, as the tail is uniform blackish grey with no trace of a subterminal band; upper surface ash grey, paler on head; bands on chest dark brown, narrower than in *C. micropterus*.

241. *Penthoceryx sonnerati venustus* (Jerdon).

Cuculus venustus, Jerdon, Madr. Journ. xiii, 1842, p. 140 (Malacca).

Penthoceryx sonnerati, B., p. 52 (Junk Seylon); E., p. 40 (Trang); L. p. 98 (Ghirbi).

Penthoceryx sonnerati pravata, Robinson & Kloss, Journ. F. M. S. Mus. viii, pt. 2, 1918, p. 135 (North Malay Peninsula).

Penthoceryx sonnerati venustus, Baker, Bull. Brit. Orn. Club, xxxix, 1919, p. 46 (Central Tenasserim, southwards).

Our specimens possess the characters given for *P. venustus* (Jerdon) by Mr. Baker (*l. c. s.*).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. Insel Salanga, 1892.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

242. *Cacomantis merulinus querulus* Heine.

Cacomantis querulus, Heine, Journ. f. Orn. 1863, p. 352 (Nepal ; Burma).

Cacomantis threnodes, A., p. 158 (Mergui to Bankasoon) ; B., p. 53 (Junk Seylon) ; C. ii, p. 112 (Tenasserim and Malay Peninsula).

Cacomantis merulinus, Shelley, Cat. Birds B. M. xix, 1891, p. 268 (Mergui to Bankasoon) ; E., p. 105 (Patani) ; F., p. 40 (Trang) ; H., p. 146 (Koh Samui).

Cacomantis merulinus querulus, I., p. 101 (Koh Lak) ; K., p. 98 (Koh Lak) ; L., p. 98 (Junk Seylon).

♂. Mamok, Pakchan, Peninsular Siam, 28 February 1919 (No. 4315).

♂ ad, ♀ imm. Tapli, Pakchan, Peninsular Siam, 9 March 1919 (Nos. 4321, 4449).

♂ imm. Tasan, Chumporn, Peninsular Siam, 17 March 1919 (No. 4658).

"Iris crimson or reddish ; bill black, gape yellow ; feet ochreous or yellow."

Total length ♂, 216, 225, 212 ; ♀, 215 ; wing ♂, 103, 109, 107 ; ♀, 104 ; tail ♂, 115, 119, 113 ; ♀, 107 ; tarsus ♂, 16, 18, 16 ; ♀, 16 ; bill from gape ♂, 23, 22.5, 23 ; ♀, 24 mm.

The paler southern race, *C. m. threnodes* Cab. and Heine, of the Malay States, has not yet been met with in Peninsular Siam.

243. *Cacomantis sepulchralis sepulchralis* (Müller).

Cuculus sepulchralis, S. Müller, Verh. Nat. Gesch. Land-en Völkern, 1839-44, p. 177, note (Java and Sumatra).

Cacomantis sepulchralis sepulchralis, J., p. 155 (Koh Muk ; Trang).

♂ ad., ♀ imm. Tapli, Pakchan, Peninsular Siam, 4 March 1919 (Nos. 4416, 4423).

"Iris brown, orbital ring yellow ; bill black, reddish at base ; feet yellow, claws dark."

Total length ♂, 225 ; ♀, 240 ; wing ♂, 107 ; ♀, 112 ; tail ♂, 125 ; ♀, 127 ; tarsus ♂, 15 ; ♀, 16 ; bill from gape ♂, 23.5 ; ♀, 25 mm.

Two examples were obtained on Khao Luang, Nakawn Sri Tamarat, in March 1922.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

244. *Chalcococcyx maculatus* Gm.

Trogon maculatus, Gmelin, Syst. Nat. i, 1788, p. 404 (Ceylon: errore! Substitute Pegu).

Chalcococcyx maculatus, F., p. 41 (Trang); L., p. 98 (Ghirbi).

Both this species and *C. xanthorhynchus* are commoner in the north of the Peninsula than the south, but are everywhere rare.

Though Gmelin described this bird as from Ceylon, the species does not seem to occur there and we have therefore selected Pegu for the typical locality.

245. *Chalcococcyx xanthorhynchus* (Horsf.).

Cuculus xanthorhynchus, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 179 (Java).

Chalcococcyx xanthorhynchus, A., p. 506 (Bankasoon and Tavoy); E., p. 105 (Patani); F., p. 41 (Trang); H., p. 93 (Bandon); Shelley, Cat. Birds B. M. xix, 1891, p. 291 (Ghirbi; Bankasoon; Tavoy); Williamson, Journ. Nat. Hist. Soc. iii 1918, p. 25 (Patani and Bangkok).

Chrysococcyx xanthorhynchus, C. ii, p. 114 (Malewoon); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 433 (Malewoon).

246. *Chalcococcyx malayanus malayanus* (Raffles).

Cuculus malayanus, Raffles, Trans. Linn. Soc. xiii, 1822, p. 286 (Malay Peninsula).

Chalcococcyx malayanus, E., p. 105 (Patani).

Possibly a winter visitor: the specimen from Patani is the only record for the Kingdom of Siam.

247. *Eudynamis scolopacea malayana* (Cab. & Heine).

Eudynamis malayana, Cabanis and Heine, Mus. Hein. iv, 1862, p. 52 (Sumatra); A., p. 162 (Tavoy to Bopyin); B., p. 54 (Junk Seylon); C. ii, p. 119 (Burma and Malay Peninsula).

Eudynamis honorata, D., p. 74 (Patani); E., p. 105 (Patani); G., p. 150 (Ratburi and Petchaburi).

Eudynamis orientalis, F., p. 41 (Trang); H., p. 146 (Koh Samui and Koh Pennan).

Eudynamis orientalis malayana, J., p. 161 (Trang; Koh Pennan; Koh Samui; Langkawi); K., p. 99 (Tachin); L., p. 98 (Junk Seylon; Pulau Panjang).

Eudynamis orientalis honorata, J., p. 161 (Langkawi).

♀. Pulau Mohea, Peninsular Siam, 2 February 1919 (No. 3917).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1893.

D. Bonholc, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂, 2 ♀. Koh Pipidon, Ghirbi Bay, Peninsular Siam, 3-4 February 1919 (Nos. 3927-28, 3934).

♂. Tung Pran, Takuatung, Peninsular Siam, 12 February 1919 (No. 3960).

♀. Mamok, Pakchan, Peninsular Siam, 28 February 1919 (No. 4307).

"Iris red; bill bluish or greenish slate; feet plumbeous green."

Total length ♂, 395, 423; ♀, 408, 398, 428, 417; wing ♂, 198, 198; ♀, 201, 196, 210, 207; tail ♂, 194, 203; ♀, 203, 198, 208, 203; tarsus ♂, 31, 33; ♀, 38, 31, 33.5, 35; bill from gape ♂, 36, 39; ♀, 42, 40, 40, 39 mm.

From their larger dimensions this series would appear to belong to the Malayan form, *E. s. malayana*, but discrimination between this and the closely allied small Indian form, *E. s. scolopacea* (Linn.), is difficult and uncertain. Hartert gives the wing-length of the latter as 187-197 mm. (Nov. Zool. x, 1903, p. 236), and no Siamese birds we have seen are so small.

248. *Centropus sinensis intermedius* (Hume).

Centrococcyx intermedius, Hume, Stray Feathers, i, 1873, p. 454 (Dhoon; Dacca; Thayetmyo); A., p. 168 (Tavoy to Pakchan).

Centrococcyx rufipennis, B., p. 59 (Junk Seylon).

Centrococcyx eurycercus, B., p. 60 (Malay Peninsula).

Centropus sinensis, D., p. 74 (Patani); E., p. 105 (Patani); F., p. 41 (Trang); G., p. 150 (Ratburi and Petchaburi).

Centropus sinensis intermedius, H., pp. 92, 146 (Bandon; Koh Samui; Koh Pennan); J., p. 157 (Koh Muk and Koh Lontar; Trang); K., p. 99 (Koh Lak); L., p. 99 (Ghirbi; Junk Seylon; Pulau Panjang); M., p. 441 (Peninsular Siam).

♂ ? Koh Pipidon, Ghirbi Bay, Peninsular Siam, 5 February 1919 (Nos. 3942, 3).

♂, ♀ ? Koh Yam Yai, Renong, Peninsular Siam, 18 February 1919 (Nos. 4108, 4110).

♂ imm. Koh Tung Pran, Takuapah, Peninsular Siam, 18 February 1919 (No. 4100).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

2 ♀. Namchuk, Pakchan, Peninsular Siam, 25 February 1919 (Nos. 4221, 4229).

♂. Hat Sanuk, S. W. Siam, 14 April 1919 (No. 5298).

"Iris carmine; bill and feet black."

Total length ♂, 497, 498, 500; ♀, 475, 498, 560; wing ♂, 205, 197, 190; ♀, 196, 198, 209; tail ♂, 268, 256, 272; ♀, 258, 260, 280; tarsus ♂, 54, 48, 49; ♀, 52.5, 55, 55; bill from gape ♂, 47, 43, 41; ♀, 45, 47, 52 mm.

Birds from Patani probably belong to the South Malay and Sumatran race, *Centropus s. bubutus* (Horsf., Trans. Linn. Soc. xiii, 1821, p. 180), which has a longer wing and a longer but narrower tail, and is duller chestnut in colour.

249. *Centropus bengalensis javanicus* (Dumont).

Cuculus javanicus, Dumont, Diet. Sci. Nat. xi, 1818, p. 144 (Java).

Centropus bengalensis, A., p. 171 (Tavoy to Malewcon); G., p. 150 (Ratburi and Petchaburi).

Centrococcyx bengalensis, B., p. 58 (Junk Seylon); C. ii, p. 127 (Tenasserim).

Centropus javanicus, Shelley, Cat. Birds, B. M. xix, 1891, p. 355 (Tavoy; Bankasoon; Malewcon; Siam).

Common in long grass.

250. *Zanclostomus javanicus pallidus* Rob. & Kloss.

Zanclostomus javanicus pallidus, Rob. & Kloss, Journ. Fed. Malay States Mus. x, 1921, p. 203 (Kedah).

Zanclostomus javanicus, A., pp. 107, 506 (Tavoy to Malewcon); B., p. 57 (Junk Seyon); E., p. 104 (Patani); F., p. 42 (Trang); H., p. 94 (Bandon); Robinson and Kloss, Journ. Fed. Malay States Mus. vi, 1916, p. 226 (Kedah).

A hill bird, fairly common in heavy jungle.

The typical form, a more deeply coloured bird, is confined to Java, whence we have large series

251. *Rhopodytes tristis longicaudatus* Blyth.

Phaenicophaeus longicaudatus, Blyth, Journ. Asiat. Soc. Bengal, x, 1841, p. 923 (Moulmein); I., p. 104 (Koh Lak); K., p. 100 (Koh Lak).

Rhopodytes tristis, A., p. 162 (Tavoy; Tenasserim town); C. ii, p. 161 (Mergui; Tenasserim river); E., p. 103 (Patani); F., p. 42 (Trang); H., pp. 94, 146 (Bandon and Koh Samui).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornithologie der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1882.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gaimard, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂ ad. Mamok, Pakchan, Peninsular Siam, 28 February 1919 (No. 4306).

♂ ad., ♀ ad. Tapli, Pakchan, Peninsular Siam, 6-8 March 1919 (Nos. 4445, 4506).

3 ♂, 1 ♀. Koh Lak, S. W. Siam, 2-7 April 1919 (Nos. 4928, 4970, 5117, 5137).

3 ♂, 1 ♀, 1 unsexed. Hat Sanuk, near Koh Lak, S. W. Siam 12-17 April 1919 (Nos. 5262, 5270, 5314, 5343, 5370).

"Iris red, orbital skin red; bill green; feet plumbeous."

Total length, ♂, 587, 555, 603, 555, 555, 530, 568, 618; ♀, 468, 591, 503; wing ♂, 153, 150, 162, 159, 157. 155, 160, 169; ♀, 162, 156, 158; tail ♂, 390, 380, 420, 395, 373, 375, 410, 435; ♀, 290, 411, 340; tarsus ♂, 38, 36, 36, 41, 37, 35, 36, 36; ♀, 37, 37, 37; bill from gape ♂, 39, 41, 41, 38, 40, 37, 37, 38; ♀, 37, 37, 38, mm.

Hartert's *Rhopodytes tristis hainanus* of Hainan (Nov. Zool. xvii, 1910, p. 218) does not differ in size of wing from Blyth's earlier described but overlooked form from Tenasserim, and unless there exist differential characters hitherto unnoted, that name will have to rank as a synonym of *R. t. longicaudatus*.

252. *Rhopodytes diardi* (Less.).

Melias diardi, Lesson, Traité d'Ornith., 1831, p. 132 (Sumatra).

Rhopodytes diardi, A., p. 163 (Mergui to Malewoon); D., p. 75 (Patani); E., p. 103 (Patani); F., p. 42 (Trang); L., p. 99 (Ghirbi).

253. *Rhopodytes sumatranus* (Raffles).

Cuculus sumatranus, Raffles, Trans. Linn. Soc. xiii, 1822, p. 287 (Sumatra).

Rhopodytes sumatranus, A., p. 164 (Mergui to Malewoon); B., p. 56 (Malay Peninsula); J., p. 158 (Trang); L., p. 29, (Ghirbi); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 433 (Malewoon).

Poliococcyx sumatranus, C. ii, p. 123 (S. Tenasserim).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

254. *Rhinortha chlorophaea chlorophaea* (Raffles).

Cuculus chlorophaea, Raffles, Trans. Linn. Soc. xiii, 1822, p. 288 (Sumatra).

Rhinortha chlorophaea, A., p. 166 (Travoy to Bankasoon); B., p. 57 (Junk Seylen); E., p. 104 (Patani); F. p. 42 (Trang).

Rhinortha chlorophaea chlorophaea, M., p. 440, (Tung Song, Peninsular Siam).

♂. Tapli, Pakchan, Peninsular Siam, 3 March 1919 (No. 4377).

"Iris dark; orbital skin verditer; bill green; feet grey."

Total length 330; wing 116; tail 180; tarsus 27; bill from gape 33 mm.

255. *Phoenicophaës curvirostris erythrognathus* Bp.

Phoenicophaës erythrognathus, Bonaparte, Consp. Av., i, 1850, p. 98 (Sumatra); A., pp. 165, 506 (Tavoy to Malewoon); M., p. 449 (Peninsular Siam).

Rhamphococcyx erythrognathus, B., p. 57 (Junk Seylon and Malay Peninsula); Salvad. Ann. Mus. Civ. Gen. (2) vii, 1889, p. 433 (Malewoon).

Urococcyx erythrognathus, D., p. 76 (Patani); F., p. 43 (Trang); H., p. 94 (Bandon); L., p. 99 (Ghirbi and Junk Seylon).

3 ♂. Tasan, Chumporn, Peninsular Siam, 20-23 March 1919 (Nos. 4724, 4772, 4817).

"Iris orange, orbital skin crimson; bill green, red at base; feet greenish plumbeous."

Total length 465, 442, 460; wing 165, 170, 110; tail 280, 255, 260; tarsus 45, 42, 41; bill from gape 42, 45, 46 mm.

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Inselalanga, 1852.

C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

CAPITONIDÆ.

BARBETS.

1	{ No green on plumage; no rictal bristles	<i>Calorhamphus fuliginosus hayi</i>	2
	{ Prevailing colour green; long rictal bristles	.. .. .
2	{ Head and neck brown, more or less streaked	.. .. .	3
	{ Head and neck with bright colours	.. .. .	4
3	{ Ear-coverts and breast brownish	<i>Thereiceryx lineatus intermedius</i>	
	{ Ear-coverts and breast green	<i>T. f. faiostrata</i>	
4	{ Breast striped	<i>Xantholema hæmocephala indica</i>	
	{ Breast not striped	.. .. .	5
5	{ Crown green	<i>Cyanops incognita</i>	
	{ Crown not green	.. .. .	6
6	{ Lower cheeks bright yellow	.. .. .	12
	{ Lower cheeks not bright yellow	.. .. .	7
7	{ Crown red	<i>Chotorhea mystacophanes</i> (see 13)	
	{ Crown not red	.. .. .
8	{ Forehead black	.. .. .	11
	{ Forehead yellow	<i>Cyanops henrici</i>	
	{ Forehead red	.. .. .	9
9	{ Crown blue	<i>C. davisoni</i>	
	{ Crown yellow	.. .. .	10
10	{ Ear-coverts and lower throat silvery grey	<i>C. ramsayi</i>	
	{ Ear-coverts and lower throat blue	<i>C. oorti</i>	
11	{ Subocular patch pure red, a distinct black gorget	<i>C. d. duvauceli</i>	
	{ Subocular patch red and yellow, no marked black gorget	<i>C. d. stuarti</i>	
12	{ Crown uniform red	<i>Chotorhea r. rafflesii</i>	
	{ Crown banded	<i>Ch. chrysopogon lætus</i>	
13	{ Forehead yellow	<i>Ch. mystacophanes</i> , ♂	
	{ Forehead blue	<i>Ch. mystacophanes</i> , ♀	

256. *Calorhamphus fuliginosus hayi* (J. E. Gray).

Bucco hayi, Gray, Zool. Misc. 1832, p. 33 (Malacca).

Calorhamphus hayi, A., p. 149 (Bankasoon and Malewoon); C. ii. p. 138; F., p. 43 (Trang); H., p. 165 (Pulau Lontar); L., p. 99 (Tongkah or Puket).

Calorhamphus fuliginosa hayi, M., p. 431 (Peninsular Siam).

♂. Tasán, Chumporn, Peninsular Siam, 16 March 1919 (No. 4627).

"Iris rich brown; bill black; feet orange vermilion."

Total length 177; wing 78; tail 56; tarsus 25; bill from gape 29 mm.

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part.)
 J. Robinson, Journ. F. M. S. Mus. vii, 1917. Baker, Journ. N. H. Soc. Siam, iii, 1919.
 K. Kloss, Ibis, 1918. (second part.)
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part.)

This species is strictly an inhabitant of evergreen forests: the present bird is the northernmost recorded.

257. *Chotorhea chrysopogon laetus* Rob. & Kloss.

Chotorhea chrysopogon, D., p. 72 (Patani); F., p. 43 (Trang); H., p. 94 (Bandon).

Chotorhea chrysopogon laetus, Robinson & Kloss, Journ. Fed. Malay States Mus. viii, pt. ii, 1918, p. 141 (Negri Sembilan).

Chotorhea chrysopogon chrysopogon, M., p. 429 (Peninsular Siam).

Common in heavy jungle in Trang and Bandon, where it attains its northern limit.

There is no variation in this barbet through its range in the Malay Peninsula. The mainland form is distinguished from the typical Sumatran race by its deeper coloured yellow malar patches, and from the Bornean *Ch. chrysopogon chrysopsis** by its larger size, duller forehead without bright yellow tips to the feathers, and paler ear-coverts.

258. *Chotorhea rafflesii rafflesii* (Lesson).

Bucco Rafflesii, Lesson, Rev. Zool. 1839, p. 137 (Sumatra).

Chotorhea versicolor, F., p. 43 (Trang); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 24 (Patani).

Megalaema versicolor, B., p. 74 (Coast adjacent to Junk Seylon?)

"Iris chestnut; bill black, slaty at base; feet greenish lead."

This Gaudy Barbet is common in the interior of Trang, but is not recorded from further north than the vicinity of Puket, whence Müller obtained one example.

Specimens from the whole length of the Peninsula, Trang, Perlis, Kedah, Perak, Selangor and Pahang exhibit no differences *inter se*; but we have been unable to compare them with typical Sumatran birds. Bornean birds, on the other hand, even when fully adult, have a paler blue superciliary stripe, and the quadrate yellow spot on the sides of the throat paler, less orange yellow, though, with Shelley, we can see no differences in the extent of the red on

* *Megalaema chrysopsis*, Goffin, Mus. Pays Bas, Buccones, 1863, p. 15.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Borneo, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1915.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, iv, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

the crown and nape. They should be known as *Chotorhea rafflesii borneensis* (*Megalaema versicolor borneensis*, Blasius, Verh. Z. b. Ges. Wien, xxxiii, 1883, p. 25.)

Stresemann has pointed out (Anz. Orn. Ges. Bayern, 1921, p. 24) that *Bucco versicolor* Raffles, the name by which this species has universally been known, is preoccupied by *Bucco versicolor* P. L. S. Müller, and that the next oldest name is Lesson's.

259. *Chotorhea mystacophanes* (Temm.).

Bucco mystacophanes, Temminck, Pl. Col. 315, 1827 (Sumatra).

Bucco quadricolor, Eyton, P. Z. S., 1839, p. 105 (Malacca).

Megalaema mystacophanes, A., p. 152 (Nwalabo to Malewoon); B., p. 75 (Junk Seylon).

Chotorhea mystacophanes, C. ii, p. 72; F. p. 43 (Trang); H., p. 94 (Bandon).

Cyanops mystacophanes, D., p. 73 (Patani); F., p. 102 (Patani); M., p. 429 (Peninsular Siam).

Cyanops mystacophanes aurantiifrons, L., p. 100 (Ghirbi).

♀. Pangnga river, W. Peninsular Siam, 11 February 1919 (No. 3950).

♂, ♀. Mamok, Pakchan Estuary, Peninsular Siam, 28 February – 3 March 1919 (Nos. 4314, 4391).

♂. Tapli, Pakchan Estuary, Peninsular Siam, 14 March 1919 (No. 4858).

5 ♂, 4 ♀. Tasan, Chumpon, Peninsular Siam, 16 – 27 March 1919 (Nos. 4628, 4648, 4669, 4715, 4820, 4841–2, 4867, 4911).

Male. "Iris rich brown; bill black; feet greenish plumbeous." Female. "Bill black, pale lead at base of lower mandible."

Total length ♂, 213, 208, 232, 211, 215, 198, —; ♀, —, 232, 228, 237, 225, 222; wing ♂, 95, 94, 97, 96, 98, 95, —; ♀, —, 96, 94, 100, 100, 98; tail ♂, 60, 56, 58, 60, 60, 57, —; ♀, —, 60, 58, 58, 58, 58; tarsus ♂, 27, 26, 27, 26, 27, 27, —; ♀, —, 27.5, 26.5, 26, 26, 26; bill from gape ♂, 41, 42, 44, 44, 43, 41, —; ♀, —, 48, 44, 45, 45, 46 mm.

The characters on which we founded *C. m. aurantiifrons* are not stable, and the name cannot be maintained: the orange red fore-

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

head, in some cases almost uniform with the vertex, is evidently connected with age: but whether it is a sign of youth or very extreme age we are unable to say with certainty, though we incline to the belief that very old birds have a pure yellow forehead.

The very large series in our possession makes it practically certain that the sexes in this barbet, as suggested by Salvadori and Blanford, are widely different. We have no female whatever in which any part of the throat is uniform red, or which possesses a clearly defined yellow or red frontal band. The blue beneath the eyes is always paler and the yellow spot at the base of the bill much reduced. Neither have any of them a marked blue throat-patch. We possess but few juvenile males, but one bird, barely half grown, has the red throat and the blue gular patch beneath it strongly marked.

The species is very much commoner in the southern parts of Peninsular Siam than it is in British Malaya. It has not, however, been recorded from S. W. Siam, where possibly *C. davisoni* takes its place. Stuart Baker again erroneously records Herbert's Tung Song specimen as new to Peninsular Siam, whence it has been repeatedly obtained.

Cyanops incognita (Hume).

Megalaema incognita, Hume, Stray Feathers, ii, 1874, pp. 442, 486 (25 miles north of Yea); A., p. 501 (neighbourhood of Tavoy).

Cyanops asiatica ? *incognita*, M., p. 429 (Tung Song, Peninsular Siam).

This species has been obtained so near the northern boundary of the area here dealt with that it is reasonable to include it among birds which occur in the northern half of the Peninsula. Mr. Stuart Baker identifies specimens as this form with considerable doubt: they are stated to be young birds.

260. *Cyanops davisoni* (Hume).

Megalaema davisoni, Hume, Stray Feathers, v, 1877, p. 108 (Central Tenasserim); A., p. 151.

Cyanops davisoni, C. ii, p. 184; Shelley, Cat. Birds Brit. Mus. xix, 1891, p. 65, pl. iv, fig. 1; H., p. 94 (Khao Nawng, Bandon, 3,500 ft.); G., pp. 137, 149 (Rajburi and Petchaburi).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Inselalanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grand, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

The two specimens recorded from the upper slopes of Khao Nawng were obtained on 23rd and 25th June 1913. Male and female closely resemble each other; but in the latter the scarlet patches on the sides of the throat are only slightly developed. The red occipital patch is much smaller than shown in Shelley's figure, and the yellow tips to the feathers of the frontal red band are practically non-existent, as indeed is mentioned in Hume's original description.

Four birds (1 ♂, 3 ♀) obtained on Khao Luang, 4,500 ft., Nakorn Sri Tamarat, in March 1922, precisely agree with the two from Khao Nawng.

Possibly *C. davisoni* is only the fully adult *C. incognita*, which has precedence by three years.

* * * * *

There are four other barbets that may possibly be found in Peninsular Siam — all being birds with the general plumage green:—

***Cyanops oorti* (S. Müll.).**

Throat rich yellow, succeeded by blue; a narrow frontal red band; crown pale yellow.

This is only likely to occur on high elevations in the south. It is elsewhere known from Sumatra and the mountains of the British portion of the Malay Peninsula, with an allied form, *C. o. annamensis*, in the mountains of Annam.

***Cyanops ramsayi* (Wald.).**

Throat yellow, succeeded by a broad silvery grey gorget, forehead broadly red, crown bright yellow; sides of the head silvery grey.

This also is only likely to be found at considerable elevations: it is known from Karennee, North Tenasserim, North Siam, and the mountains of Perak, Selangor and Pahang.

***Cyanops henricii* (Temm.).**

Throat blue, without yellow; forehead and superciliary stripe rich yellow almost surrounding a blue crown.

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| <p>I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.</p> <p>J. Robinson, Journ. F. M. S. Mus. vii, 1917.</p> <p>K. Kloss, Ibis, 1918.</p> <p>L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.</p> | <p>M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).</p> <p>Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).</p> <p>M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).</p> |
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This is a lowland species; it will be probably found to occur in Patani as it is known from North Kelantan.

Cyanops asiatica (Lath.).

Like *C. davisoni* but rather larger: a broad black median crown-band succeeded by a red forehead, the posterior feathers tipped with yellow forming a narrow line of that colour.

This species may possibly occur: it is known from North Siam.

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261. *Thereiceryx lineatus intermedius* Stuart Baker.

Megalaema hodgsoni, A., p. 151 (Tavoy; Shymotee).

Cyanops hodgsoni, C. ii, p. 132.

Thereiceryx hodgsoni, F, p. 102 (Patani).

Cyanops lineata, E., p. 73 (Kedah).

Thereiceryx lineatus hodgsoni, Hartert, Nov. Zool. ix, 1902, p. 546 (Kelantan).

Thereiceryx lineatus, Kloss, Journ. Fed. Malay States Mus. iv, 1911, p. 139 (Trengganu); G., p. 149 (Petchaburi and Rajaburi); K., p. 100 (Lat Bua Kao, E. Siam).

Thereiceryx lineatus intermedius, Stuart Baker, Bull. Brit. Orn. Club, xxxix, 1918, p. 9 (Lahpoon, N. Tenasserim); id., Ibis, 1919, p. 214; M., p. 427.

♂, ♀. Victoria Point, S. Tenasserim, 23-24 February 1919 (Nos. 4168 4186).

6 ♂. Namchuk, Pakchan Estuary, Peninsular Siam, 25-26 February 1919 (Nos. 4202-3, 4210, 4214, 4251-2).

2 ♀, Mamoh, Pakchan Estuary, Peninsular Siam, 26 February 1919 (Nos. 4266-7).

♂. Tapli, Pakchan Estuary, Peninsular Siam, March 1919 (No. 4426).

3 ♂, 2 ♀. Koh Lak, Rajburi, S. W. Siam, 4-9 April 1919 (Nos. 5057, 5067, 5070, 5170, 5198).

♂, 2 ♀. Hat Sanuk, Rajburi, S. W. Siam, 13-15 April 1919 (Nos. 5271, 5278, 5304).

"Iris dark brown, orbits pale chrome; bill pale brownish horn; feet yellow."

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Barmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1915.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Total length ♂	275, 276, 276, 270, 269, 268, 270, 275, 254, 272, 272, 263 mm.
Wing	127, 126, 128, 123, 125, 125, 125, 119, 121, 125, 119 (worn), 126 mm.
Tail	83, 105, 90, 85, 88, 90, 88, 82, 78, 90, 86, 82, mm.
Tarsus	31, 29.5, 30, 30, 31, 29, 29, 31, 25, 28.5 27.5, 26.5 mm.
Bill from gape	39.5, 41, 41, 39, 40.5, 39.5 42, 40, 36, 37.5, 41, 39 mm.
Total length ♀	273, 282, 270, 255, 270, 269, 278 mm.
Wing	121, 127, 121, 118, 120, 124, 127 mm.
Tail	86, 87, 84, 78, 82, 85, 85 mm.
Tarsus	30, 28, 29, 30, 29, 30, 26 mm.
Bill from gape	38 app., 41, 38, 41, 40, 41, 42 mm.

It is curious that Davison should not have obtained this barbet at Pakchan Estuary, as it was very common both on the Siamese side and at Victoria Point, where its gong-like note at once attracted attention.

Our considerable series noted above is very constant both in size and colour, the dark edges to the feathers of the breast being not nearly so marked as on the birds from Eastern Siam, which are freshly moulted.

The racial divisions as laid down by Baker seem well justified, but we should like to hear more details about the type of *Megalaema maclellandi* Horsf. and Moore, from Assam. It is within the bounds of possibility that this name is the one really applicable to the present form.

As noted in the synonymy, the species spreads as far south as the coast of Trengganu. It has never been obtained in the Federated Malay States.

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part.) |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. |
| K. Kloss, Ibis, 1918. | (second part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |

262. *Thereiceryx faiostratus faiostratus* (Temm.).

Bucco faiostratus, Temm. Pl. Col. v, 1831, pl. 527 (Cochin China).

Thereiceryx flavostrictus, K., p. 100 (Lat Bua Kao, Eastern Siam).

Thereiceryx faiostricta faiostricta, Stuart Baker, Ibis, 1919, p. 216; M., p. 428 (S. E. Siam).

♀. Hat Sanuk, Rajburi, S. W. Siam, 16 April 1919 (No. 5344).

"Iris reddish orange, orbits sage; upper mandible black, tomtia pale, lower mandible pale horn; feet greenish."

Total length 248; wing 113; tail 70; tarsus 26; bill from gape 38 mm.

Agrees closely in size and other particulars with specimens from Eastern Siam and Annam. The occurrence is an interesting extension of range, as the species does not appear to have been recorded from west of the Menam river.

263. *Mesobucco duvauceli stuarti* Rob. and Kloss.

Mesobucco duvauceli stuarti, Robinson & Kloss, Journ. N. H. Soc. Siam, iii, 1919, p. 100 (Junk Seylon).

Megalaema cyanotis, A., p. 155 (partim: spms. from Nwalabo?, Tavoy? and Malewoon).

Xantholaema cyanotis, C. ii, p. 137 (Southern birds).

Xantholaema duvauceli, B., p. 75 (Puket or Junk Seylon).

Mesobucco duvauceli, E., p. 102 (Nongchik, N. Patani).

Mesobucco cyanotis, F., p. 43 (Trang), H., p. 94 (Bandon).

Cyanops duvauceli robinsoni, Stuart Baker, Bull. Brit. Orn. Club, xxxix, 1918, p. 20 (partim; Peninsular Siam and Burma); id., Ibis, 1919 p. 219 (partim: Malay Peninsula, excluding the Malay States).

♂. Tapli, Pakchan Estuary, Peninsular Siam, 2 March 1919 (No. 4350).

"Iris dark brown; bill black, base of lower mandible slate; feet sage green."

Total length 168; wing 77; tail 49; tarsus 18; bill from gape 23 mm.

By the kindness of the Director of the Zoological Survey of India we have before us a series of this genus from the collection of the Indian Museum, including the type of *Bucco cyanotis* Blyth, Journ. Asiat. Soc. Bengal, xvi, 1847, p. 465 (Aracan), and find that

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S., 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gardner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Mesobucco cyanotis orientalis, Robinson, Ibis, 1915, p. 738, from the Siamese south-eastern frontier, is synonymous with it, as Mr. Stuart Baker has already shown. On the other hand, Peninsular Siam birds south to Perlis (thirteen adult birds examined) differ from the types of *M. d. cyanotis* and *M. c. orientalis* in being distinctly smaller with the wing apparently always under 80 mm. The black throat-spot is always obsolescent and the ear-coverts almost unmixed verditer blue, except in the bird from Perlis which is approaching *M. d. duvauceli*. We have named this form, as above, *M. d. stuarti*. Stuart Baker has named the bird from Klang, Selangor, *C. d. robinsoni*, giving as the range the whole of the Malay Peninsula, and stating that the ear-coverts are mixed blue and black and the black spot on the breast small. As regards birds from Perak, Selangor and further south, this is however not the case: somewhat immature birds, in which the black forehead is not sharply defined, have frequently the ear coverts mixed with blue, but fully adult birds often have them as black as in specimens from Sumatra and Borneo. In very many south Peninsula birds the black spot on the breast is fully as pronounced as in Bornean examples, of which we have a very large series. Sumatran birds are rather smaller and are *Mesobucco duvauceli duvauceli* (Less.), while the Malayan bird, wing 73-79, and the Bornean, wing 72-76, if any division is to be made, will have to be known as *M. d. borneensis* Parrot (Abhandl. Ak. Wissensch. Math. Phys. München, 1907, Kl. xxiv, pp. 149, 288). We have seen no birds from South Patani, nor are any on record; but, since Perlis examples are intermediate, they may possibly belong to the southern race.

Perhaps very large series of birds from the British portion of the Malay Peninsula and from Borneo may make it possible to retain the name *M. d. robinsoni* for the former, but on the very considerable numbers now in our possession we are quite unable to separate them.

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
 J. Robinson, Journ. F. M. S. Mus. vii, 1917.
 K. Kloss, Ibis, 1918.
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

- M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
 Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
 M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

The type locality decides the question: the name *M. d. robinsoni* can only apply to birds from Selangor and those which agree with them, viz., birds of the Malay States. Those from more northern parts of the Peninsula, though associated by Baker with these, are different.

264. *Xantholaema haemacephala indica* (Lath.).

Bucco indicus, Lath. Ind. Orn. i, 1790, p. 205 (India).

Xantholaema haemacephala, A., p. 155 (Tavoy to Bankasoon); C. ii, p. 136; B., p. 75 (Puket or Junk Seylon); F., 44 (Trang); H., p. 95 (Bandon); G., p. 149 (Petchaburi and Rajaburi); Robinson & Kloss, Journ. Fed. Malay States Mus. viii, pt. ii, 1918, pp. 142, 143 (Sumatra); L., p. 101 (Junk Seylon; Ghirbi; Pulau Panjang); I., p. 101 (Koh Lak); Salvad. Ann. Mus. Civ. Gen. (2) vii, 1889 p. 432 (Malewoon); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1917, p. 325 (S. W. and Peninsular Siam).

Xantholaema haemacephala indica, Stuart Baker, Ibis, 1919, p. 221; M., p. 431 (Peninsular Siam).

♂. Namchuk, Pakchan Estuary, Peninsular Siam, 24 February 1919 (No. 4200).

♂, ♀. Koh Lak, Rajburi, Peninsular Siam, 1-3 April 1919 (Nos. 4925, 5011).

"Iris hazel, orbital ring crimson lake; bill black, pale at base; feet crimson."

Total length ♂, 155, 164; ♀, 161; wing ♂, 84, 24; ♀, 80; tail ♂, 38, 36; ♀, 38; tarsus ♂, 18, 20; ♀, 21; bill from gape ♂, 23, 23; ♀, 23 mm.

Baker's conclusions are in the main the same as ours. In the absence of specimens from the Philippines we refrained from dividing the species into races; but as he has now shown that the Philippine bird has a very much larger bill, *X. h. indicus* is correctly indicated as the name for the continental race.

We cannot, however, agree that the continental and Sumatran races are identical. We have now compared over thirty specimens of the latter with an equal number of the former, and find that in all the Sumatran birds the yellow patch below the scarlet one on the

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

breast is very much reduced or even entirely lacking; the difference is so striking and so constant that Parrot was fully justified in separating the Sumatran bird as *Megalaema haemacephala delicu* (Abh. K. Bayer. Acad. d. Wissensch. 11. Kl., Bd. 24, 1 Abh., 1907 p 169: Deli, N. E. Sumatra). *Bucco rafflesius* Boie, applied to this bird, is a nomen nudum.

INDICATORIDAE.

INDICATORS OR HONEY-GUIDES.

265. *Indicator archipelagicus* Temm.

Indicator archipelagicus, Temminck, Pl. Col. 1832, pl. 542, fig. (Borneo); F., p. 44 (Trang).

The only record for Siam is the bird obtained by us in Trang in 1909.

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

PICIDAE.

WOODPECKERS.

1	{ Tail feathers with stiff shafts (Picine)	2
	{ Tail feathers with flexible shafts (Picumnina)	24
2	{ Toes four	3
	{ Toes three	22
3	{ Primaries spotted or banded	4
	{ Primaries uniform	19
4	{ With more or less green in the plumage	5
	{ With no clear green in the plumage	12
5	{ Lower surface without stripes or cross-bars	6
	{ Lower surface with either stripes or cross-bars	9
6	{ Throat uniform	7
	{ Throat chequered black and white	8
7	{ Wings largely olive	<i>Picus canus microrhynchus</i>
	{ Wings largely crimson	<i>P. puniceus continentis</i>
8	{ Breast rufous	<i>Chrysophlegma mentale humei</i>
	{ Breast not rufous	<i>C. flavinucha lylei</i>
9	{ Under parts cross-banded	<i>Callolophus miniatus</i>
	{ Under parts striped	10
10	{ Breast uniform	<i>Picus vittatus eisenhoferi</i>
	{ Breast striped like belly	11
11	{ Dark colour predominating below; rump greenish yellow or green	<i>P. viridanus</i>
	{ Pale colour predominating below; rump yellow or orange	<i>P. myrmecophonus</i>
12	{ Back unbarred	13
	{ Back cross-barred	15
13	{ Lower parts uniform	14
	{ Lower parts squamated	<i>Chrysocolaptes g. gutticristatus</i>
14	{ Rump white or yellow	<i>C. validus xanthopygius</i>
	{ Rump dull crimson	<i>Blythipicus rubiginosus</i>
	{ Rump brown	<i>B. pyrrhotis</i>
15	{ Rump uniform cream	<i>Meiglyptes tristis grammithorax</i>
	{ Rump barred like back	16
16	{ Upper parts not black and white	17
	{ Upper parts black, barred with white	18
17	{ Colour blackish brown, barred buff	<i>M. tukki tukki</i>
	{ Colour rufous, barred black	<i>Micropternus brachyurus</i>
18	{ Vent red: wing about 3.75 inches	<i>Dryobates analis longipennis</i>
	{ Vent like belly: wing about 3.75 inches	<i>D. canicapillus canicapillus</i>
19	{ Size small: wing less than 4 inches	20
	{ Size large: wing over 8 inches	21
20	{ Throat creamy	<i>Hemicircus c. canente</i>
	{ Throat grey	<i>H. concretus sordidus</i>
21	{ General colour black	<i>Thriponax javensis</i>
	{ General colour grey	<i>Mülleripicus pulverulentus harterti</i>
22	{ Lower parts squamated	<i>Dinopium javanense</i>
	{ Lower parts uniform	23

- A. Innes & Davison, *Stray Feathers*, vi, 1878.
 B. Müller, *Die Ornith der Insel Salanga*, 1882.
 C. Oates, *Birds Brit. Burmah*, Vols. i & ii, 1883.
 D. Bonhote, *P. Z. S.* 1901, Vol. i.

- E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.
 F. Robinson and Kloss, *Ibis*, 1910-11.
 G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.
 H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

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| 23 | { Throat like the breast | <i>Gecinulus viridis</i> | |
| | { Throat brownish buff | <i>Chloropicoides rafflesi peninsularis</i> | |
| | { Under surface white, spotted black | <i>Picumnus innominatus malayorum</i> | |
| 24 | { Under surface uniform rufous in adults, | | |
| | { green in young | | 25 |
| 25 | { A white stripe above the eye | <i>Sasia ochracea reichenowi</i> | |
| | { No white stripe above the eye | <i>S. abnormis</i> | |

266. *Picus vittatus eisenhoferi* Gyldenstolpe.

Picus vittatus eisenhoferi, Gyldenstolpe, Ornith. Monatsber, 1916, p. 28 (North Siam).

Gecinulus vittatus eisenhoferi, Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1917, p. 320 (S. W. Siam).

Picus vittatus vittatus, Baker, Ibis, 1919, p. 189; M., p. 420.

This large race of *G. vittatus* does not seem to have been met with south of Nong Khae and Hua Hin, whence came Williamson's specimens: and no other examples of the species have been met with between these localities and the Langkawi Islands, where occurs an apparently isolated form, *P. v. connectens*,¹ distinguished by its dark grass-green back and wings and lack of bronze tinge. It is intermediate in size between *P. v. eisenhoferi* and *P. v. vittatus*, which is known in the Malay States from Selangor southwards.

267. *Picus viridanus* (Blyth).

Picus viridanus, Blyth, Journ. Asiat. Soc. Bengal, xii, 1843, p. 1000 (Aracan); L., p. 89 (Koh Lak).

Gecinulus vittatus (non Vieill.); A., p. 136 (Tavoy to Bankasoon).

Gecinulus weberi, B., p. 69 (Puket or Junk Seylon).

Gecinulus viridanus, C. ii, p. 48; E., p. 101 (Patani); F., p. 45 (Trang); H., p. 95 (Bandon); J., p. 164 (Telibun; Pulau Muntia; Pulau Lontar); K., p. 104 (Koh Lak); L., p. 101 (Junk Seylon; Pulau Panjang; Ghibbi); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 432 (Malewoon).

Picus vittatus viridanus, Stuart Baker, Ibis, 1919, p. 189 (critical remarks); M., p. 420 (Patiyu).

♂. Tung Pran, Takuatung, Peninsular Siam, 14 February 1919 (No. 4009).

2 ♀. Koh Rah, Takuapah Inlet, Peninsular Siam, 15-17 February 1919 (Nos. 4029, 4049).

¹ Robinson and Kloss, Bull. B. O. C. x, 1919, p. 13 (Langkawi Ids.); F., p. 45; J., p. 164.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

♂, ♀. Koh Pra Tung, Takuapah Inlet, Peninsular Siam, 17-18 February 1919 (Nos. 4067, 4105).

♀. Renong River, Peninsular Siam, 22 February 1919 (No. 4166).

♂, 2 ♀. Namchuk, Pakchan Estuary, Peninsular Siam, 24-26 February 1919 (Nos. 4205, 4244, 4261).

♂, ♀. Mamok, Pakchan Estuary, Peninsular Siam, 27 February 1919 (Nos. 4278, 4279).

5 ♂, ♀. Koh Lak, Rajburi, Peninsular Siam, 3-10 April 1919 (Nos. 4980, 5173-5, 5194, 5235).

♂, 3 ♀. Hat Sanuk, Rajburi, Peninsular Siam, 12-15 April 1919 (Nos. 5252, 5292, 5300, 5326).

"Iris Indian red or reddish brown, orbits slate; upper mandible black, lower yellow, often dark at tip; feet greenish slate."

Total length ♂, 288, 313, 305, 306, 305, 303, 305, 293, 290, 310 mm.

Wing 137, 137, 135, 137, 142, 136, 135, 138, 132, 136 mm.

Tail 108, 113, 112, 112, 117, 111, 120, 110, 110, 110 mm.

Tarsus 27, 30, 27, 26, 28, 27, 28, 25, 28, 26 mm.

Bill from gape 38, 39, 39, 38, 37, 39, 37, —, 36.5, 35 mm.

Total length ♀, 305, 305, 287, 298, 310, 293, 290, 297, 293, 294, 298 mm.

Wing 138, 136, 137, 133, 136, 135, 130, 137, 130, 136, 130 mm.

Tail 118, 113, 110, 114, 114, 118, 113, 108, 115, 112, 113 mm.

Tarsus 28, 26, 26, 27, 28, 24, 26, 26, 24, 28, 25 mm.

Bill from gape 39, 40, 37 (imp.), 35, 38, 35, 36, 37, 35, 35, 35 mm.

A. Hume & Davison, *Stray Feathers*, vi, 1878.

B. Müller, *Die Ornis der Insel Salanga*, 1882.

C. Gates, *Birds Brit. Burmah*, Vols. i & ii, 1883.

D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grand, *Fasciculi Malayenses*, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

This species is in the main a bird of the sea coast and dry low country scrub and jungle. It is not, so far as our experience goes, found in dense evergreen jungle or in districts of heavy rainfall.

As the above synonymy goes to show, the species is well known in the northern parts of Peninsular, and also in S. W., Siam and we do not therefore quite understand Stuart Baker's remarks that Herbert's birds are the first actual record from that country. Birds obtained by ourselves in Patani and Bandon are emphatically this species, while birds from Junk Seylon are correctly included in the synonym of *viridanus* and not of *vittatus*. We cannot admit that *vittatus* and *viridanus* stand in merely subspecific relationship to each other, seeing that where the ranges of the two species touch or approach there is not the slightest sign of intergradation. *P. viridanus* extends southward on the west side of the Peninsula as far as the State of Perlis and on the east side at least as far as Patani. *P. vittatus*, on the other hand, extends north on the west side as far as the island of Langkawi, where it is slightly differentiated, but otherwise has not been found north of Selangor. It also occurs in Cochin-China, while in Siam proper and Annam it has become the larger form, *P. vittatus eisenhoferi*, which has nothing whatever to do with *G. viridanus*. The extreme variability of the species, commented on by Baker, is equally marked in the series of 50 specimens now before us, but very bright and very dull specimens occur in the same locality: the former seem to correspond to a stage that has become permanent in *P. vittatus eisenhoferi*, from which, of course, *viridanus* can be at once distinguished by having the whole of the underparts striped.

268. *Picus myrmecophoneus* Stresemann.

Picus myrmecophoneus, Stresemann, Verh. Orn. Ges. Bayern xiv, 1920, p. 289. Nom. nov.

Picus striolatus; Blyth, Journ. Asiat. Soc. Bengal, xii, 1843, p. 1000 (Himalayas). Nom. praeocc.

Gecinus striolatus, K., p. 104 (Koh Lak); C. ii, p. 49.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, This, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

Picus xanthopygius, Oberholser (nec Bp.), Proc. Biol. Soc. Washington, 32, 1919, p. 8.

The only example on record from our region is that obtained by Kloss at Koh Lak.

269. *Picus canus microrhynchus* Rob. & Kloss.

Gecinus canus microrhynchus, Robinson and Kloss, Bull. Brit. Orn. Club, xl, 1919, p. 12 (Koh Lak, S. W. Siam).

Picus occipitalis, A., p. 501 (Tavoy)?; C. ii, p. 51 (Tavoy)?

Gecinus occipitalis, Hargitt, Cat. Birds Brit. Mus. xviii, 1890, p. 59 (Meklong and Petchaburi).

Picus canus hessei, Baker, Ibis 1919, p. 184 (partim: Peninsular Burma and Siam).

♂, ♀. Koh Lak, Rajburi, S. W. Siam, 6-8 April 1919 (Nos. 5102, 5160).

5 ♂, 2 ♀. Hat Sanuk, Rajburi, S. W. Siam, 14-19 April 1919 (Nos. 5291, 5316, 5319, 5320, 5330, 5339, 5401).

"Iris red, orbits slate; bill black, sometimes tinged with greenish; feet greenish slate."

Total length ♂, 323, 332, 316, 313, 296, 312; ♀, 320, 312, 321; wing ♂, 147, 148, 146, 148, 141, 146; ♀, 142, 146, 146; tail ♂, 122, 118, 120, 118, 110, 112; ♀, 113, 116, 122; tarsus ♂, 29, 27.5, 27, 26, 28, 26.5; ♀, 28.5, 27, 28; bill from gape ♂, 43, 43, 43, 41, 41.5, 42; ♀, 42, 43, 40 mm.

Probably ranging from the Meklong river southwards into Peninsular Siam: but not known at present from the west side.

270. *Picus puniceus continentis* (Rob. & Kloss).

Brachylophus puniceus continentis, Robinson and Kloss, Journ. Fed. Malay States Mus. x, 1921, p. 204 (Renong).

Callolophus puniceus, A., p. 139 (Laynah and Bankasoon).

Chrysophlegma puniceus, C. ii, p. 44.

Gecinus puniceus, E., p. 101 (Patani).

Gecinus puniceus observandus, Hartert, Nov. Zool. iii, 1896, p. 542 (Sumatra).

Gecinus observandus, E., p. 46 (Trang).

♂. Tapli, Pakehan Estuary, Peninsular Siam, 3 March 1919 (No. 4382, type).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1915.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂, ♀. Tasan, Chumporn, Peninsular Siam, 15-22 March 1919 (Nos. 4596, 4780).

"Iris red or reddish brown, orbits slate; upper mandible black, lower and the tomia yellow; feet green, sage green or olive brown."

Total length ♂, 261, 285; ♀, 231; wing ♂, 132, 136; ♀, 125; tail ♂, 97, 102; ♀, 98; tarsus ♂, 23, 26; ♀, 22.5; bill from gape ♂, 36, 32; ♀, 34 mm.

This subspecies is essentially an inhabitant of the damper evergreen forests throughout the Malay Peninsula.

271. *Chloropicoides rafflesi peninsularis* (Hesse).

Gauropicoides rafflesi, A., p. 146 (Bankasoon); C. ii, p. 42 (S. Tenasserim); E., p. 100 (Perak).

Gauropicoides rafflesi peninsularis, Hesse, Ornith. Monatsb. xix, 1911, p. 192 (Malacca); Stuart Baker, Ibis, 1919, p. 210; M., p. 426 (Tung Song).

♂. Tasan, Chumporn, Peninsular Siam, 29 March 1919 (No. 4921).

Wing, dry, 146 mm.; tail 122 (worn); bill from gape 40 mm.

Our material of this genus is not extensive; such as it is, it confirms the validity of Hesse's two subspecies from the mainland and Borneo. The present bird, like others from the Peninsula, has the mantle brighter golden yellow than Sumatran specimens; the rump is strongly flecked with scarlet.

Chloropicoides Malherbe, has priority by eleven years over the same author's *Gauropicoides*.

272. *Gecinulus viridis viridis* (Blyth).

Gecinulus viridis, Blyth, Journ. Asiat. Soc. Bengal, xxxi, 1862, p. 341 (Toung-hoo); H., p. 144 (Mergui and Pakchan); C. ii, p. 41; H., p. 95 (Bandon); K., p. 105 (East Siam).

2 ♂, ♀. Tapli, Pakchan Estuary, Peninsular Siam, 3-5 March 1919 (Nos. 4381, 4418, 4428).

♂. Tasan, Chumporn, Peninsular Siam, 17 March 1919 (No. 4641).

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| <p>I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.</p> <p>J. Robinson, Journ. F. M. S. Mus. vii, 1917.</p> <p>K. Kloss, Ibis, 1918.</p> <p>L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.</p> | <p>M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).</p> <p>Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).</p> <p>M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).</p> |
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"Iris hazel or deep brown; bill pale livid grey or whitish slate; feet greenish or greenish slate, claws grey."

Total length ♂, 260, 265, 260; ♀, 233; wing ♂, 127, 126, 127; ♀, 129; tail ♂, 103, 98, 110; ♀, —; tarsus ♂, 25, 26, —; ♀, 28; bill from gape ♂, 30, 29, 32; ♀, 29 mm.

This woodpecker is never found far from bamboo jungle, where it occurs in pairs or more rarely in parties of three or four.

***273. *Gecinulus viridis robinsoni* Kloss.**

Gecinulus viridis robinsoni, Kloss, Ibis, 1918, p. 105 (Ginting Bidei, Selangor-Pahang boundary, 2000 ft.); L., p. 101 (Ghirbi).

Gecinulus viridis, Hume, Stray Feathers, ix, 1880, p. 112 (Kasoom).

The occurrence of this race in the Kingdom of Siam rests on the specimen from Ghirbi above quoted, and on another from Kasoom in the British Museum. Our bird is, of course, somewhat intermediate between the southern race and the typical form from North Tenasserim.

274. *Dryobates canicapillus canicapillus* (Blyth).

P(icus) canicapillus, Blyth, Journ. Asiat. Soc.* Bengal, xiv, 1845, p. 197 (Aracan); C. ii, p. 36 (S. Tenasserim).

Yungipicus canicapillus, A., pp. 124, 500 (Tavoy to Malewoon).

Iyngipicus pumilus Hargitt, Ibis, 1881, p. 599 (South Tenasserim: Malewoon); id. op. cit. 1882, p. 39 (S. Tenasserim); id. Cat. Birds B. M. xviii, 1890 p. 321 (Tavoy; Mergui; Malewoon; Kossoum); ? Salvad., Ann. Mus. Civ. Gen (2 a) vii, 1889 p. 432 (Malewoon); C. ii, p. 37 (Malewoon).

Iyngipicus canicapillus, E., p. 98 (Patani); F., p. 46 (Trang); H., p. 147 (Koh Samui).

♂. Tung Pran, Takuatung, Peninsular Siam, 13 February 1919 (No. 3985).

♂. Namchuk, Pakehan Estuary, Peninsular Siam, 25 February 1919 (No. 4240).

"Iris sienna or brown; bill greenish lead, culmen black or slaty black; feet plumbeous green or greenish slaty."

* We have not inserted this race in our key: it differs merely from the typical form in being slightly darker and in having the white spots on the inner webs of the primaries smaller.

A. Hume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornithologie der Inselalanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Total length 137, 145; wing 84, 82; tail 43, 48; tarsus 13.5, 15; bill from gape 20.5, 20 mm.

Much commoner, as a rule, near the coast, especially among casuarinas, but also found inland.

We have followed Blanford, as has Gyldenstolpe (I., p. 93), in not maintaining *I. pumilus* Hargitt, even as a local race of this species, and Baker's remarks on the subject (Ibis, 1919, p. 192) are in accordance. Incidentally it may be pointed out that there is an unfortunate, though obvious, misprint in his passage. In the fourth line *picatus* should replace *auranteiventris*, which is a very distinct and perfectly good species: later on *auranteiventris* is misprinted *aurlventris*.

The specimen from Namchuk has only one small spot on one median tail feather, while that from Tung Pran has four large spots on both.

It is not impossible that birds from Central and Southern Tenasserin, Siam and French Indo-China may ultimately prove separable from more northern Burmese and Assamese birds, which are typical *I. canicapillus* (type, Ramree Id., Aracan). In this case they would after all have to bear the name *I. pumilus* (type from Malewoon), though the characters may be other than those assigned to that race in the original description.

Comparison of the series of ten birds from the Northern Malay Peninsula, which may or may not be true *I. canicapillus*, show that the Southern Malay bird (21 specimens examined) is quite readily separable, and we have named it *I. c. suffusus* (Bull. B. O. C., xl., 1914, p. 14 (type from Kuala Lumpur).

275. *Dryobates analis longipennis* (Hesse).

Dendrocopus analis longipennis, Hesse, Orn. Monatsb. xx, 1912, p. 82 (Bangkok); id Mitt. Zool. Mus. Berlin, 86, 1912, p. 156 (Siam).

Picus pectoralis, Blyth, Journ. Asiat. Soc. Bengal, xv, 1846, p. 15 (Habitat unknown). Preoccupied by *Picus pectoralis* Latham, Ind. Orn. Suppl. 1801, p. 32.

Dryobates analis, Stresemann, Nov. Zool. xx, 1913, p. 349 (partim: Indo-China).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F.M.S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N.H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N.H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N.H. Soc. Siam, iv, 1920. (third part).

Dendrocopus pectoralis, Williamson, Journ. N. H. Soc. Siam, i, 1914, p. 45; id. op. cit. ii, 1917, p. 321 (Bangkok).

Dendrocopus analis, Robinson & Kloss, Ibis, 1919, p. 435 (S. Annam).

Dendrocopus pectoralis pectoralis, M., p. 424 (Bangkok).

♂, 2 ♀. Koh Lak, S. W. Siam, 9-10 April 1919 (Nos. 5215, 5219, 5220).

"Iris dark brown or reddish; bill slate, culmen dark; feet slate with a greenish tinge".

Total length ♂, 175; ♀, 178, 171; wing ♂, 100; ♀, 102, 100; tail ♂, 63; ♀, 62, 60; tarsus ♂, 17; ♀, 16.5, 16.5; bill from gape ♂, 25; ♀, 24, 23.5 mm.

These specimens certainly confirm Hesse's separation of the mainland form, inasmuch that they are all 100 mm. or over in wing measurement, while an Annam female is 100 and the type, from Bangkok, is 101 mm.

Birds collected by us in West Java measure 91-98 (16 ex.), Mid-Java 90-98 (5 ex.) and East Java 92-98 (10 ex.). No bird seems to have been recorded from Java with a wing longer than 98 mm., nor from Bali longer than 100 mm.

On the other hand, as Stresemann's measurements show (Nov. Zool. xx, p. 349), Burmese birds range from 93 to 104, Annam 102; Siam from 96 to 102 and Cochin-China from 92 to 101 mm.

In addition to attaining a greater maximum wing length, Indo-Chinese birds seem to have the black spots on the breast more pronounced than Sundanese examples.

276. *Blythipicus rubiginosus* (Swains.).

Hemicircus rubiginosus, Swainson, Birds of West Africa, ii, 1837, p. 150 (Malacca? Hartlaub).

Picus porphyromelas, Boie, News Staatsbürgerl. Mag. 1, 1832, p. 489 (Nomen nudum).

Picus melanogaster, Hay, Madras Journ. 1844, p. 153 (Malacca).

Venilia porphyromelas, F., p. 46 (Trang).

Blythipicus porphyromelas, M., p. 244 (Patiyu).

3 ♂, ♀. Tasan, Chumporn, Peninsular Siam, 14-26 March 1919 (Nos. 4592, 4642, 4857-8).

A. Hume, & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Inselalunga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii 1893.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

"Iris red; bill wax yellow, tinged with green at base; feet greenish slate."

Total length ♂, 218, 230, 231; ♀, 221; wing ♂, 124, 122, 123; ♀, 123; tail ♂, 82, 77, 79; ♀, 78; tarsus ♂, 24.5, 24, 23; bill from gape ♂, 36, 38, 38; ♀, 33 mm.

Strictly a bird of the evergreen forests.

Sumatran birds range from 113–122 mm. in length of wing.

***Blythipicus pyrrhotis* (Hodgs.).**

Picus pyrrhotis, Hodgs. Journ. Asiat. Soc. Bengal, vi, 1837, p. 108 (Nepal).

As this species occurs in North Tenasserim and North Siam, and has also been collected by us in the hills of the Malay States, it is almost certain to be found eventually in the intervening area.

277. *Meiglyptes tristis grammithorax* (Malh.).

Phaiopicus grammithorax, Malherbe, Picidae, ii, 1862, p. 12, pl. xlviii, figs. 4, 5 (Malay Peninsula).

Meiglyptes tristis (nec Horsf.), A., pp. 131, 501 (Nwalabo and Bankasoon); B., p. 72 (Puket or Junk Seylon).

Meiglyptes grammithorax, F., p. 46 (Trang); H., p. 95 (Bandon); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 25 (Patani).

Meiglyptes tristis grammithorax, M., p. 422 (Tung Song and Patiyu).

♂. Tapli, Pakchan Estuary, Peninsular Siam, 2 March 1919 (No. 4347).

2 ♂, 4 ♀. Tasan, Chumporn, Peninsular Siam, 13–26 March 1919 (Nos. 4544, 4670, 4730, 4854–6).

"Iris red, more usually reddish brown; bill black; feet greenish slate."

Total length ♂, 178, 183, 178; ♀, 177, 177, 175, 175; wing ♂, 94, 100, 95; ♀, 96, 98, 98, 97; tail ♂, 55, 55, 58; ♀, 57, 55, 51, 53; tarsus ♂, 19, 12, 17; ♀, 19.5, 20, 18.5, 18; bill from gape ♂, 23.5 app., 24, 20; ♀, 21, 24, 22, 22 mm.

We can discover no difference between northern and southern Malay birds except that the southern birds are, as usual, slightly smaller: eight Sumatran birds range from 89–96 mm. in wing, and ten southern Malay birds 92–100 mm.

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| <p>I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.</p> <p>J. Robinson, Journ. F. M. S. Mus. vii, 1917.</p> <p>K. Kloss, Ibis, 1918.</p> <p>L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.</p> | <p>M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).</p> <p>Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).</p> <p>M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).</p> |
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Bornean birds are distinctly smaller (four specimens measure 85–91 mm.), and have been named by Hesse *M. t. micropterus*, Ornith. Monatsb. xix, 1911, p. 182. Oberholser has also named the Nias bird *M. grammithorax micropterus*, as resembling "*M. g. grammithorax*, but smaller." (Smiths. Misc. Coll. 60, No. 2, 1912, p. 6.) We do not know how it is to be distinguished from the Bornean bird, the name for which has priority.

It has by some authors been assumed that birds of this genus, and especially of this species, possess two phases of plumage, a greyer and a browner one. From an examination of our large series we are enabled to state, with some confidence, that this is largely a post mortem change, skins even when kept away from light gradually becoming buffier on their light area and more rufous brown in their dark parts. Freshly collected birds in fresh plumage have the light parts delicate creamy and the dark parts greyish black, the whole bird appearing as if washed over with very pale glaucous green or grey.

This also is an evergreen forest bird, common wherever it is found.

278. *Meiglyptes tukki tukki* (Less.).

Picus tukki, Less., Rev. Zool. 1839, p. 167 (Sumatra).

Hemicercus brunneus, Eyton, P. Z. S. 1839, p. 106 (Malacca).

Meiglyptes tukki, A., p. 132 (Bankasoon); C. ii, p. 61; D., p. 71 (Patani); E., p. 98 (Patani).

2 ♂, ♀. Tasan, Chumporn. Peninsular Siam, 16–26 March 1919 (Nos. 4633, 4805, 4853).

"Iris reddish brown; upper mandible black, lower pale greenish slate or greenish black; feet greenish yellow, greenish olive brown or greenish slate."

Total length ♂, 203, 208; ♀, 210; wing ♂, 101, 101; ♀, 101; tail ♂, 70, 64; ♀, 73; tarsus ♂, 21, 21; ♀, 21; bill from gape ♂, 28, 27; ♀, 28 mm.

These are the most northerly specimens hitherto recorded.

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| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fascioli Malayenses, iii (Birds), 1915. |
| B. Müller, Die Ornith. der Insel Salanga, 1882. | F. Robinson and Kloss, This, 1910–11. |
| C. Gates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gardner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

We can perceive no difference between Sumatran, Bornean or Malayan birds either in size or colour.

279. *Micropternus brachyurus squamigularis* Sundev.

Picus squamigularis, Sundevall, Consp. Picin., 1866, p. 89 (Malacca).

Micropternus brachyurus, B., p. 72 (Junk Seylon); D., p. 72 (Patani); H., p. 95 (Bandon).

Micropternus phaiiceps, E., p. 99 (Patani); L., p. 102 (Ghirbi).

♀. Mamoh, Pakchan, Peninsular Siam, 27 February 1919 (No. 4280).

6 ♂, 2 ♀, 1 ♀ imm. Tasan, Chumporn, Peninsular Siam, 13-24 March 1919 [Nos. 4280, 4545, 4602, 4637, 4652, 4731, 4791, 4798, 4831, 4844].

"Iris hazel; bill black, base of lower mandible slate; feet brownish black."

Total length ♂, 237, 228, 236, 236, 230; ♀, 225, 241, 231; wing ♂, 120, 112, 118, 116, 112, 115; ♀, 118, 122, 117; tail ♂, 70, 70, 70, 67, 72, 70; ♀, 72, 68, 73; tarsus ♂, 22, 20.5, 20, 21, 23, 22; ♀, 22, 22, 26; bill from gape ♂, 28, 27.5, 28, 27, 28, 27.5; ♀, 28, 30, 28 mm.

The above are not typical *squamigularis*, but are best placed with that race. The black barring is much heavier than in the following subspecies and the throats are much darker.

280. *Micropternus brachyurus williamsoni* Kloss.

Micropternus brachyurus williamsoni, Kloss, Ibis, 1918, p. 107 (Koh Lak, S. W. Siam); M., p. 424 (Bangkok, Meklong); Baker, Ibis, 1919, p. 202.

Micropternus phaiiceps, A., pp. 145, 501 (Tavoy and Nwalabo).

Micropternus brachyurus, A., p. 145 (Mergui to the Pakchan); C. ii, p. 58 (Mergui to Malewoon); G., p. 149 (Ratburi or Petchaburi); M., p. 425 (Patiyu).

3 ♂, 2 ♀. Koh Lak, S. W. Siam, 2-7 April 1922 (Nos. 4931, 5059, 5109, 5146, 5183).

"Iris hazel; bill black, grey at base; feet brownish black."

Total length ♂, 232, 235, 248; ♀, 238, 238, wing ♂, 120, 118 (worn), 122; ♀, 116, 116; tail ♂, 67, 75 (worn) 68; ♀, 73, 67; tarsus

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

♂, 23, 22, 23; ♀, 23, 21; bill from gape ♂, 29, 29.5, 30; ♀, 27, 29 mm.

Apart from the southern Indian *M. b. gularis*, the Ceylon representative *M. b. lanka*, the transitional *M. b. mesos* from Orissa, the very distinct *M. b. badius* from Borneo, and the southern Chinese forms, which we do not propose to discuss, we regard the following forms, working from south to north (and disregarding Oberholser's "Barussan" birds, of which we have no material or description to base an opinion on), as probably sufficiently distinct to merit a name:—

(a). *Micropternus brachyurus brachyurus* (Vieill.).

Picus brachyurus, Nouv. Dict. d'Hist. Nat. xxv, 1818, p. 103 (Java).

We have one example only, but it confirms Hargitt's statement that "specimens from Java are larger than the Sumatran bird and have the feathers of the throat blacker with white margins" (Ibis, 1885, p. 12). These characters suffice to separate it from the following:—

(b). *Micropternus brachyurus badius* (Raffles).

Picus badius, Trans. Linn. Soc. xiii, 1822, p. 289 (Sumatra).

(c). *Micropternus brachyurus squamigularis* (Sundev.).

Picus squamigularis, Consp. Picin., 1866, p. 89 (Malacca).

Our south Malayan birds average lighter, more ochreous, less chestnut bay, than the seven Sumatran birds that we have examined; they may therefore be kept distinct under this name. Range, from the extreme south of the Peninsula northwards to about 9° N.

Between Bandon and Victoria Point birds, though very constant in their characters, *inter se*, are quite intermediate and defy even trinomial division (10 specimens examined). By the time we reach Koh Lak (Lat. 12° N.) the birds have become larger, black markings have diminished and the tail bars narrowed; these birds are:—

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Borneo, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

(d). *Micropternus brachyurus williamsoni* Kloss.

Micropternus brachyurus williamsoni, Ibis, 1918, p. 107 (Koh Lak, S. W. Siam).

This form probably ranges over the whole of South Tenasserim and S. W. Siam and grades into:—

(e). *Micropternus brachyurus burmanicus* Hume.

Micropternus burmanicus, Proc. Asiat. Soc. Bengal, 1872, p. 71 (Thayetmyo, Pegu).

Still larger, with markings more reduced.

This race probably occupies all Siam, north of Bangkok, N. Tenasserim and the Shan States, South and Central Burma, and possibly Arracan (wing 129 mm.). North of this area is found:—

(f). *Micropternus brachyurus phaeocephus* Blyth.

Micropternus phaeocephus, Journ. Asiat. Soc. Bengal, xiv, 1849, p. 195 (Neighbourhood of Calcutta¹).

This race is smaller on the whole than *burmanicus*, less immaculate, more rufous on the shafts of the primaries and tail feathers. Range—Bengal and Assam, meeting the preceding in the South and East: *M. brachyurus mesos* in the South-west: and in the North-west:—

(g). *Micropternus brachyurus blythi* (Malherbe).

Phaiopicos Blythii, Rev. & Mag. Zool. (2) i, 1849, p. 534 (Nepal).

Because authors have been unable, or have omitted, to refer directly to Malherbe's own writing, there has been a good deal of confusion about this race which, however, was cleared up by Hesse in 1912 (Mitt. Zool. Mus. Berlin, vi, 1912, p. 195 et seq.).

Malherbe first called the race *Picus rufinotus* in 1844, but gave no description: hence the name is invalid. In 1849 (*l. c. s.*) he described the bird and renamed it *Phaiopicus Blythii*: "dédiée au savant directeur du Muséum de Calcutta, habite le Nepaul..... Elle a été apportée par M. Hadgson" (Hodgson). Still later he withdrew *blythii* and again called the race *rufinotus* "Le *Phaiopice rufinote*

¹ The actual types of this form are a male and female collected by E. Blyth in 1844 in the neighbourhood of Calcutta.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

a été rapporté du Nepaul par M. Hodgson,.....J'avais en 1849 changé le nom que j'avais donné primitivement à cette espèce, pour la dédier à l'honorable directeur du Muséum à Calcutta : mais les observations réitérées qui m'ont été adressées à ce sujet, m'ont décidé à maintenir à regret le nom de *rufinotus* déjà inscrit dans les musées de l'Europe et dans plusieurs publications." (Monogr. Picid., Text II (1862) pp. 1-3, De 46, Figs. 1, 2). Meanwhile, in 1850, Bonaparte had recorded *Picus rufinotus* with a description (Consp. Gen. Av., p. 113: Central Asia—Specimen in the British Museum), but too late to save the name which ranks as a synonym of *P. blythii*.

In the Cat. Birds. Brit. Mus. xviii, p. 395, the type of *P. rufinotus* Malh., is stated to be a skin from Bengal. Baker writes (Ibis, 1919 p. 203) "The name *rufinotus* is a synonym of *gularis*. The specimen said to be the type is marked as having been taken by McClelland in Assam: in the B. M. catalogue it is said to come from Bengal, but the bird itself is a typical *gularis* from Southern India"! As shown, however, Nepal is the type locality of *Micropternus phaiiceps blythii*, and the type is one of Hodgson's specimens in the Natural History Museum.

This is a larger race than *M. b. phaiiceps*, getting larger from South-East to North-West.

(h). *Micropternus brachyurus humei* Kloss.

Micropternus brachyurus humei, Ibis 1918, p. 109 (Kumaon).

The most north-westerly and the largest form.

281. *Dinopium javanense javanense* (Ljung).

Picus javanensis, Ljungh, K., Vet. Ak. Nya Handl. xviii, 1797, p. 137 (Batavia, Java).

Chrysonotus javanensis, B., p. 64 (Puket or Junk Seylon).

Tiga javanensis, D., p. 72 (Patani); E., p. 99 (Patani); F., p. 47 (Trang); H., p. 95 (Bandon); Hesse, Mitt. Zool. Berlin, 6, 1912, p. 188 (critical).

Tiga javanensis javanensis, Stuart Baker, Ibis, 1919, p. 207 (critical); Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1917, p. 324 (Patani).

A. Hume & Davison, Stray Feathers, vi, 1876.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Dinopium javanense palmarum, Stresemann, Arch. f. Naturgesch. 87, 1921, p. 93 (Sumatra and Malacca).

2 ♂,* 2 ♀. Tung Pran, Takuatung, Peninsular Siam, 14 February 1919 (Nos. 3989, 3990*, 3991, 4011).

"Iris chestnut; bill slate, culmen black; feet plumbeous sage green."

Total length ♂, 271, 283*; ♀, 262, 270; wing ♂, 134, 141*; ♀, 133, 136; tail ♂, 103, 108*; ♀, 102, 110; tarsus ♂, 23, 23*; ♀, 22, 22; bill from gape ♂, 34, 34.5*; ♀, 33, 33 mm.

Dr. Stresemann has recently separated Sumatran birds from the typical Javan form on account of smaller size and named them *D. j. palmarum* (l. c. s.), giving the wing-length as 122–136 mm. 10 ex.). Hesse records 128–132 (4 ex.): Sumatran birds measured by us have wings 122–135 (19 ex.): on the other hand, Baker (Ibis, 1919, p. 206) records Sumatran measurements as 118–139 (8 ex.).

For Javan birds Stresemann has 131–140 (6 ex.). Hesse records specimens of 136.5 and 142.5: our series measures 126–137 (21 ex.) and Baker gives 124–138 (23 ex.).

Birds of the Malay Peninsula south of 10° lat. measure, according to Baker, 122–136 (31 ex.): our series has wings 125–141 (27 ex.).

To summarise these figures:—

Java, wings 124–142.5

Malay Peninsula, south of 10°, wings 122–141

Sumatra, wings 118–139.

There seem scarcely any grounds for separation in these dimensions: but we are not concerned for the moment with Sumatran birds. Stresemann has, however, associated Malayan birds (south of the Isthmus of Kra) with *D. j. palmarum*; but we cannot separate them from the typical Javanese form.

* No. 3990 (♂) is practically *D. javanense intermedia*.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

282. *Dinopium javanense intermedium* (Blyth).

Picus (Tiga) intermedius, Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 193 (Aracan).

Tiga javanensis (part.), A., pp. 146, 501 (Nwalabo to Malewoon); C. ii, p. 55.

Tiga javanensis intermedia, I., p. 95 (Koh Lak); K., p. 109 (Koh Lak); Stuart Baker, Ibis, 1919, p. 208; Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1917, p. 323 (Koh Lak).

Tiga intermedia, Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 432 (Malewoon).

♂. Renong river, Peninsular Siam, 21 February 1919 (No. 4136).*

♀. Victoria Point, S. Tenasserim, 24 February 1919 (No. 4181).*

♂. Tapli, Chumporn, Peninsular Siam, 5 March 1919 (No. 4429).

2 ♂, 5 ♀. Koh Lak, S. W. Siam, 1-10 April 1919 (Nos. 4880, 4894, 5066, 5083, 5172, 5185, 5242).

"Iris chestnut, orbits slate; culmen black; feet greenish slate or pale plumbeous green".

Total length ♂, 280*, 280, 287, 282; ♀, 275*, 274, 285, 283, 271, 275; wing ♂, 140*, 141, 141, 145; ♀, 138*, 141, 142, 142, 142; tail ♂, 105*, 98, 98, 112; ♀, 108*, 108, 98, 102, 107, 110; tarsus ♂, 23*, 24, 23, 23; ♀, 24*, 23, 23, 23, 23, 22; bill from gape ♂, 34*, 35, 36, 36, ♀, 33.5*, 32.5, 35, 33, 32, 34 mm.

We are, on the question of the races of this woodpecker, in substantial agreement with the views of Baker (*l.c.s.*), though there are one or two points on which remarks may not be amiss.

As in so many instances, the area with which we are now dealing extends over both sides of a well defined faunal boundary. The specimens from Koh Lak in our collection are undoubtedly *D. j. intermedia*; while specimens from Bandon and Trang, south to Selangor, are just as clearly *D. j. javanense*. Birds from the Pakchan

*Nos. 4136 (♂) and 4181 (♀) are ranging towards *D. j. javanense*.

A. Hume & Davison, *Stray Feathers*, vi, 1878.

B. Müller, *Die Ornith. der Insel Salanga*, 1882.

C. Oates, *Birds Brit. Burmah*, Vols. i & ii, 1883.

D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

Estuary are more nearly the former; while the series from Takua-tung is closest to the latter. The birds are therefore strictly in accordance with the geographical facts: their variation, as pointed out by Baker, is mainly a function of latitude. It is of interest to note that, when we get to Java and Bali, variation is a matter of longitude.

In Mr. Baker's paper referred to, Aracan is fixed as the type locality of *D. j. intermedia*, and with this also we agree; but for the sake of definiteness would further restrict it to Ramree Island, for the following reasons. The race was described in 1845 by Blyth, and in his Catalogue of Birds in the Museum of the Asiatic Society, Calcutta, p. 56, he listed seven specimens, viz.,

- 254 A. ♂, from Tenasserim (Rev. J. Barbe 1841).
 „ B. ♂, from Ramree Id., Aracan (Capt. J. R. Abbott, 1844).
 „ C. D. ♀ ♀, from Aracan (Capt. Phayre, 1844-5).
 „ E. ♂, } from Penang (Rev. L. Barbe, 1846).
 „ F. G. ♀ ♀, }

All these specimens are still extant, and have been examined by us. Nos. 254 E. F. and G. need not be considered; further, they were received after the race was described, and do not as a matter of fact belong to it: their wings measure, E. ♂ 132, F. ♀ 127, G. ♀ imm. 119.5 mm.

No. 254 A., male from Tenasserim, has a wing 144.5 mm. It probably came from the neighbourhood of Ye.

No. 254 B. has a wing of 144 mm., bill from gape 34; we select it as the ♂ type of the species.

No. 254 C. has a wing of 146 mm., bill from gape 33.5. We select this as the ♀ type of the species.

It should be noted that Blyth, in his capacity of Curator of the Museum of the Asiatic Society of Bengal, forwarded in 1844 and 1846 large collections of birds by several separate despatches to London, c.f. Horsfield and Moore (Cat. Birds Mus. East Ind. Co., vol. i,

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| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part). |
| J. Robinson, Journ. F. M. S. Mus., vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

1854, p. v). Amongst these was a male, locality unspecified, of *Tiga intermedia*, which is claimed by those authors as the type of the race [*op. cit.* ii, 1856-8, p. 658], and is also recorded as such by Hargitt (Cat. Birds Brit. Mus. xviii, 1890, p. 416, spm. *w*). There is no evidence, however, that this is the case, and in the absence of definite locality, it would be extremely inconvenient to regard it as such.

Finally, we think that the very large size of birds from the north of Burma would fully have justified the description of yet another subspecies. The Zoological Survey of India possesses a male from Yebo, South Shan States, collected by the late Col. Bingham on 15th December 1899, having a wing measurement of 153.5 mm. and bill from gape of 36 mm.

283. *Callolophus miniatus malaccensis* (Lath.).

Picus malaccensis, Latham, Ind. Orn. i, 1770, p. 241 (Malacca).

Chrysophlegma malaccensis, E., p. 100 (Patani); E., p. 46 (Trang); H., p. 95 (Bandon).

Callolophus malaccensis, A, p. 140 partim (Bopyin to Malewoon); B., p. 68 (Junk Seylon).

Callolophus miniatus malaccensis, L., p. 101 (Ghirbi and Puket).

♀. Tapli, Pakchan Estuary, Peninsular Siam, 2 March 1919 (No. 4346).

♀. Tasan, Chumporn, Peninsular Siam, 14 March 1919 (No. 4591).

♀. Khao Tong, 300 ft., Nakorn Sri Tamarat, Peninsular Siam, 20 February 1922.

"Iris red; upper mandible black, lower slate; feet greenish slate."

Total length 247, 262, —; wing 128, 127, 129; tail 88, 90, 92; tarsus 24, 23, 22; bill from gape 30, 28, 28 mm.

The transition from typical *C. m. malaccensis* to the northern form discussed below is, of course, gradual: but we consider the above birds nearest to the typical Malaccan race. All have the crest and mantle strongly barred.

A. Hume, & Davison, *Stray Feathers*, vi, 1878.

B. Müller, *Die Ornithologie der Inselalanga*, 1882.

C. Oates, *Birds Brit. Burmah*, Vols. i. & ii 1893.

D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

284. *Callolophus miniatus perlutus* Kloss.

Callolophus malaccensis, A., p. 140 partim (Tavoy to Tenasserim Town); C. ii, p. 47.

Chrysophlegma miniatum malaccense, Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916, p. 91 (Hat Sanuk).

Callolophus miniatus perlutus, Kloss, Ibis, 1918, p. 110 (Koh Lak); Stuart Baker*, Ibis, 1919, p. 193 (critical remarks).

Callolophus mineatus malaccensis, M., p. 423 (Patiyu).

2 ♂, vix ad. Hat Sanuk, Rajburi, S. W. Siam, 13-18 April 1919 (Nos. 5272, 5389).

"Iris red or vienna brown; upper mandible black, lower silvery slate; feet sage or plumbeous green."

Total length 263, 268; wing 136, 135; tail 98, 98; tarsus 25, 25; bill from gape 30, 33 mm.

Stuart Baker in some critical remarks on this race has laid down that it cannot be maintained; but his statements in support of his opinion are very generalised and the facts are against him. In the past the use of large scale charts has been urged by British politicians, and the advice is equally pertinent to modern day systematists. The political entity, Siam, covers fully 15 degrees of latitude, or a sixth of the earth's quadrant from pole to equator; it comprises districts with a rain-fall varying from 400 inches to 40, and with a range of temperature which may be 50 degrees or may not exceed 20. It is, therefore, surely unscientific to contend, because birds found in one district or area, which include in their descriptive data the word "Siam," do not agree in characters with another set in which this word is also included, that characters not found in both sets have no real existence and are not differential.

Mr. Baker's further contention that because a character or set of characters which are dominant in one locality occur in another area, therefore a subspecies founded on them is invalid, strikes at the whole modern conception of subspecies. Nature proceeds in the

* Spelt *perlatus*.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

main by a method of trial and error, and variations which prove to be better adapted than others to the environment become dominant in that environment; it does not necessarily follow that that variation which is dominant in one locality, and has, therefore, acquired subspecific distinction, may not more or less frequently occur in other localities and environment where, however, it is more or less rapidly suppressed.

Incidentally it may be remarked that Mr. Baker, as evidenced by his work on the *Dicruridae*, and on the woodpeckers as noted above, is a great believer in average. His average is merely the arithmetic mean and, therefore, assumes that his curve of variability is symmetrical in all cases, which is extremely improbable. It would be far better if he would plot his dimensions and give us the median. In the particular case of this woodpecker, he can be safely challenged to plot the lengths on a base line of latitude and then state that increase of wing-length is not definitely associated with increase of latitude. It is probable, of course, that another factor may tend to obscure the result, as birds inhabiting higher altitudes are usually larger than those from near sea-level.

In regard to our present series, four birds have had exact data recorded, all from the immediate vicinity of Koh Lak. Their wing measurements are 140, 139, 135, 136 mm., while one from Bandon measures 135 mm.

Nineteen birds from various localities from the Pakchan Estuary to North Johore range from 122–133 mm. in length of wing, five being 130 or over: of these five, four are from altitudes of 2000 feet and over, while of the remaining fourteen, four only are from the hills. Four birds from Borneo measure 120–123 mm. (*C. m. dayak* Stresemann).

Eleven birds from Sumatra measure 116–132 mm., of which one only is over 130, while that with a wing of 116 is worn.

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| A. Hume & Davison, <i>Stray Feathers</i> , vi, 1878. | E. O. Grant, <i>Fasciculi Malayenses</i> , iii (Birds), 1905. |
| B. Müller, <i>Die Ornith. der Insel Salanga</i> , 1892. | F. Robinson and Kloss, <i>Ibis</i> , 1910-11. |
| C. Oates, <i>Birds Brit. Burmah</i> , Vols. i & ii, 1883. | G. Gairdner, <i>Journ. N. H. Soc. Siam</i> , i, 1915. |
| D. Bonhote, <i>P. Z. S.</i> 1901, Vol. i. | H. Robinson, <i>Journ. F. M. S. Museums</i> , v, 1915. |

We think, then, that in face of these figures it must be contended that the birds of the species inhabiting the area north of about 10° N. are larger birds, and that birds of high elevations are also larger.

As regards colour :

(a) Two out of the four northern birds available for examination have the yellow crest unbarred.

Two out of twenty of the southern birds have the yellow crest unbarred.

(b) Interscapulium strongly barred in three out of four northern birds. Interscapulium uniform or slightly spotted in fourteen out of twenty one southern birds; barred more or less strongly in the remaining seven.

This difference is also noted by Hume and Davison, *op. cit. supra*.

Northern birds have generally the pale interspaces on the undersurface broader and paler than in southern birds, but the character cannot be fully relied on as some southern birds have it. We think, therefore, that *C. m. perlutus* can fairly be maintained as a northern local race which, however, is not found south of about 10°. 30', as Chumporn and Pakchan birds are, on the whole, to be referred to *C. m. malaccensis*.

[A pair from Bangtaphan, S. W. Siam, lent by Mr. Williamson are also *C. m. perlutus*. Wings, 135, 136; bill from gape 32, 30 mm. Interscapulium strongly barred; one with yellow crest unbarred, one barred; underparts with pale bars broad].

285. *Chrysophlegma mentale humii* Hargitt.

Callolophus mentalis (nec. Temm.), A., p. 138 (Bankasoon); C. ii, p. 46.

Chrysophlegma humii, Hargitt, Ibis, 1889, p. 231 (♂, Malacca; ♀, Klang); E., p. 100 (Patani); F., p. 46 (Trang); H., p. 95 (Bandon), M., p. 423 (Tung Song).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

♀. "Iris brown-hazel; upper mandible plumbeous green, lower greenish horn; feet greenish."

The bird is rare in the north and only just reaches British India at Bankasoon, Tenasserim.

286. *Chrysophlegma flavinucha lylei* Kloss.

Chrysophlegma flavinucha lylei, Kloss, Ibis, 1918, p. 110 (Koh Lak); id, Journ. Nat. Hist. Soc. Siam, iv, 1921 p. 52; Stuart Baker, Ibis, 1919, pp. 192-3 (critical remarks).

Chrysophlegma flavinucha pierrei (partim), M., p. 423 (Koh Lak).

4 ♂ ad., 1 ♀ vix ad., 1 ♀ juv. Hat Sanuk, nr. Koh Lak, Rajaburi, S. W. Siam, 12-18 April 1919 (Nos. 5250-1, 5254, 5372, 5387-8).

Male adult, "Iris red, orbits sage; bill greenish ivory, whitish at tip; feet greenish slate." Female. "Iris red, orbits dark sage; bill greenish ivory, paler at tip; feet greenish slate."

Total length ♂, 322, 336, 355, 317; ♀, 328; wing ♂, 167, 160, 159, 158; ♀, 156; tail ♂, 125, 137, 123, 128; ♀, 127; tarsus, ♂, 26, 26, 29, 27; ♀, 25; bill from gape ♂, 43, 42, 47, 39; ♀, 40 (app.) mm.

The four males agree well with the type, especially in the amount and tint of the yellow on the throat: the area immediately beneath the stripes on the throat is, however, darker, and the white edgings creating the striped effect are narrower: in one specimen the lores are almost uniform with the forehead, having hardly any white.

The not quite adult female differs from the male in having the malar stripes and chin rufous, not pale yellow; and in having the lores and ocular region more extensively mottled with white.

Mr. Baker (*loc. cit.*) has gone badly astray in considering these birds as identical with *pierrei*, of which we have now a large series, including actual topotypes. Those differ in being on the whole even paler below than our Koh Lak birds: the yellow malar stripes are more restricted and so is that colour on the chin. Even in quite adult birds the white edgings to the black feathers of the throat are narrower and mixed with rufous, which is quite absent in *Ch. f. lylei*. The colour of the bill, which is important in woodpeckers, also confirms the distinction.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonholte, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1915.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gardner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

As regards dimensions, the above series agree well with the type, though it should be noted that its tail is only partially grown, and, therefore, unduly short. It will be seen, however, that one of our birds has a wing of 167 mm., which falls very little short of the upper limit for Himalayan birds, a male from Darjiling measuring 169 mm. and one from the Abor Hills, collected by S. W. Kemp, 170 mm.

If the race is to be maintained, and it seems fairly entitled to rank as a subspecies, it will rest on its somewhat pale colouration above and below, especially on the flanks.

The species was fairly common at Hat Sanuk along the course of the little stream which was flanked by extremely large fig trees. The birds were very wild, flew very high and were therefore hard to get. They were very noisy, uttering the usual penetrating woodpecker shriek.

Stuart Baker has put forward the suggestion that *C. f. pierrei* Oust., and *C. f. wrayi* from the mountains of Selangor and Perak, may possibly prove to be one and the same. We can assure him that they are two different birds. To begin with, *C. f. pierrei* is decidedly larger, the wings of adult males averaging about 155 mm., with females almost the same; while *C. f. wrayi* has a wing of 147 mm. in males and 142 in females. In the second place, *C. f. wrayi* is a very much darker bird, the yellow malar patches in the male much restricted and not extending across the chin, the stripes on the throat in adult birds almost non-existent, and the yellow nuchal crest much shorter and paler in colour: the bill, again, is different in colour, being recorded as "bluish lead, greener in the lower mandible," or "slate colour"; whereas in *C. f. pierrei* it is "maxilla black, sides of base grey; mandible grey, tip and edges black."

A readily understandable misprint requires correction, as liable to cause confusion in the future. S. Baker records a female *wrayi* from Salanga which is a synonym of the island of Puket, Tongka, or

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Junk Seylon, off the west coast of Peninsular Siam. With the exception of the specimen obtained by the Skeat Expedition on Gunong Inas in North Perak, which is the most northerly record, all known specimens of this woodpecker in Europe or elsewhere have been sent home by the F. M. S. Museums. We have never obtained *Ch. f. wrayi* in *Salanga*, or within 300 miles of it, and the citation is obviously a misprint for *Selangor*, in the mountains of which State the bird is fairly common.

Without wishing too frequently to belabour the matter of Mr. Baker's geographical inexactitudes (*Ibis*, 1919, p. 193), they being rather his misfortune than his fault, since owing to special circumstances he had to depend on labels written by a native collector, it must be noted, in the interests of correctness, that Chan Tuck (Chanteuk) and Pakchan or Pakjan (Pak Jong or Pak Chong) are not in the same part of Siam as Koh Lak, whence the type of *C. f. lylei* was procured: the latter is in S. W. Siam, not far south-east of Mergui: both the former are in the range of hills between Saraburi and Korat, which separate the basins of the Menam and Mekong. Birds from this district are undoubtedly *pierrei*, as had been previously stated by one of us, the range of which in Southern Siam is probably bounded westward by the Menam: those from S. W. Siam are, just as undoubtedly, not that bird.

287. *Chrysocolaptes guttacristatus guttacristatus* (Tick.).

Picus guttacristatus, Tickell, Journ. Asiat. Soc. Bengal, ii, 1833, p. 578 (Borabhum).

Chrysocolaptes sultaneus, A., p. 133 (Mergui to Bankasoon).

Chrysocolaptes strictus (nec. Horsf.), C. ii, p. 53.

Indopicus strictus, B., p. 61 (Puket or Junk Seylon).

Chrysocolaptes guttacristatus, E., p. 99 (Patani); F., p. 47 (Trang); H., p. 147 (Koh Samui, Bandon Bight).

Chrysocolaptes guttacristatus indo-malayicus, Hesse, Ornith. Monatsb. xix, 1911, p. 182 (Junk Seylon); Gyldenstolpe, Konigl. Svenska Vetensk. Akad. Handl. 50, No. 8, 1913, p. 49 (Central Siam); Robinson, *Ibis*, 1915, p. 739 (S. E. Siam); J., p. 161 (Terutau).

Chrysocolaptes strictus guttacristatus, K., p. 111 (E. Siam).

A. Hume & Davison, *Stray Feathers*, vi, 1878.

B. Müller, *Die Ornith. der Insel Salanga*, 1882.

C. Gates, *Birds Brit. Burmah*, Vols. i & ii, 1883.

D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grand, *Fasciculi Malayenses*, iii (Birds), 1915.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gardner, *Journ. N. H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

Chrysocolaptes gutticristatus gutticristatus, I., p. 95 (North Siam);
L., p. 102 (Ghirbi and Puket).

Chrysocolaptes guttacristatus delesserti (part.), Stuart Baker, Ibis,
1919, p. 197 (critical); M., p. 424 (Patiyu).

♂. Koh Yam Yai (Sugar loaves), Peninsular Siam, 18 February
1919 (No. 4113).

♀. Renong river, Peninsular Siam, 22 February 1919 (No.
4165).

2 ♂, ♀. Tapli, Pakchan Estuary, Peninsular Siam, 7 March
1919 (Nos. 4486, 4513, 4520).

♂. Tasan, Chumporn, Peninsular Siam, 26 March 1919
(No. 4869).

2 ♂, ♀. Koh Lak, Rajburi, S. W. Siam, 8-9 April 1919
(Nos. 5171, 5186, 5202).

2 ♂, 2 ♂ imm., 2 ♀ vix ad. Hat Sanuk, Rajaburi, S. W.
Siam, 14-17 April 1919 (Nos. 5290, 5327-9, 5361-2).

Total length ♂ 308, 305, 320, 322, 293, 305, 300, 295,
288 mm.

Wing 159, 157, 154, 165, 160, 163, 164, 159,
158 mm.

Tail 107, 80, 90, 110, 96, 95, 103, 96, 93 mm.

Tarsus 29, 30, 30, 32, 30, 29, 30, 29, 29 mm.

Bill from gape 52, 55, 54, 54, 48, 53, 52, 48 49.5 mm.

Total length ♀, 303, 313, 310, 285, 288 mm.

Wing 162, 161, 168, 156, 154 mm.

Tail 98, 104, 103, 90, 95 mm.

Tarsus 26, 29, 29, 29, 28 mm.

Bill from gape 48, 52, 52, 48, 47 mm.

"Iris light red, reddish orange, sometimes yellow, orbits slate;
bill greyish black; feet greenish slate."

We have again gone through our very considerable series of
this bird and have also examined the whole of the series in the

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Indian Museum, Calcutta (Zool. Survey of India), and can recognise the following continental forms:—

(a). *Chrysocolaptes guttacristatus sultaneus* (Hodgs.).

A large bird with a very large bill, wing 168 mm. and upwards.

Range. Himalayas and Himalayan foot-hills, eastwards to Northern Burma (specimen from Bhamo, wing 180 mm.).

(b). *Chrysocolaptes guttacristatus guttacristatus* (Tick.).

A medium sized bird, wing 155–165 mm.

Range. Bengal, Orissa south to Godavery, Assam, Aracan, the whole of Burma, Siam, Cochin-China, Malay Peninsula south to Patani: possibly Sumatra, where a form of the species is known to occur.

(c). *Chrysocolaptes guttacristatus delessertii* (Malh.).

A small bird, wing not exceeding about 155 mm., more deeply and more richly coloured than other forms.

Range. India, south of the Godavery, and Western India to the Konkan, where two specimens collected by Dr. Armstrong in April 1878 measure 156 and 149 mm. respectively.

(d). *Chrysocolaptes guttacristatus chersonesus* Kloss.

A small bird, even smaller than *C. g. delessertii*, wing from 142–150 mm., with a correspondingly shorter bill and less bright colouration.

Range. Johore, Singapore, Rhio Archipelago and Sumatra.

We are in fair agreement with Mr. Baker's discussion of the species, but we cannot admit that the south Indian and south Malayan birds are identical, separated as they are by the intervening subspecies *S. g. guttacristatus*. The southernmost known specimen of *C. g. guttacristatus* is a female collected by Robinson at Biserat, Jalor, in Pattani on June 29th 1901. South of that, until we reach the extreme south of Johore, the bird has never been met with, though the area has probably been as well collected over as any

A. Hume, & Davison, *Stray Feathers*, vi, 1878.
B. Müller, *Die Ornis der Inselalanga*, 1882.
C. Oates, *Birds Brit. Borneo*, Vols. i. & ii 1883.
D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.
F. Robinson and Kloss, *Ibis*, 1910-11.
G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.
H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

similar extent of country in Asia. Besides Singapore and the extreme southern point of Johore, we have collected *C. g. chersonesus* at Bliah, Kundur, one of the Rhio archipelago, and the specimens are now in the Tring Museum: it has also been taken at least twice in Sumatra. It is incredible that there are (as Mr. Baker states) specimens from Johore in the British Museum with wings exceeding 170 mm. There were no specimens at all from Johore in the Museum when the Catalogue was compiled in 1892, nor when one of us searched the collection in 1920, and we cannot but think that some mistake has been made in reading the labels.

288. *Chrysocolaptes validus xanthopygius* Finsch.

Chrysocolaptes xanthopygius, Finsch, Notes Leyden Museum, xxvi, 1905, p. 34 (Upper Mahakam river, Dutch Borneo).

Chrysocolaptes validus, F., p. 47 (Trang).

Chrysocolaptes validus xanthopygius, Robinson and Kloss, Journ. Fed. Malay States Mus. viii, pt. 2, 1918, p. 148 (Sumatra).

The Bornean, Sumatran, and Malay Peninsula birds differ at a glance from the typical Javan form in having the back and rump orange, flicked with flame colour, not deep crimson.

A male from Lamra, collected on 22nd February 1910, a female from Koh Khau, on January 7th 1910, a male from Chong, 24th December 1910, and a pair from Khao Ram, 1000 ft., Nakon Sri Tamarat, 23rd February 1912, are the sole records for Siam; the bird is not found at all within British Indian limits.

289. *Hemicircus concretus sordidus* (Eyton).

Dendropicus sordidus, Eyton, Ann. and Mag. Nat. Hist. xvi, 1845, p. 229 (Malacca),

Hemicircus sordidus, A., p. 128 (Bankasoon); F., p. 47 (Trang).

A single female shot at Chong, Trang, on 8th December 1909, and a male from Khao Ram, 1200 ft., Nakon Sri Tamarat, 26th February 1922, constitute the records for Siam: a male from Bankasoon, S. Tenasserim, is the sole record for British India.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, *Ibis*, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920, (third part).

Our two Peninsular Siam birds differ in no way from southern Malayan specimens of which the wing-lengths range from 81 to 89 mm. Sumatran birds, wings 81-84.5, do not seem to attain the size of the mainland ones: they have been named *H. coccomelopus* by Reichenbach (1854). Bornean birds, of which we have only a pair, wings 79-81, also seem smaller: but, like Sumatran examples, do not differ otherwise. They should be placed with the latter apparently: though if comparison of large series discloses differences, the name *H. brookeanus* Salvad. (1868: Borneo) is available. No value attaches to the tint of the pale parts (cf. Hesse, Mitth. Zool. Mus. Berlin, vi, 1912, pp. 151-153).

290. *Hemicircus canente canente* (Less.).

Picus canente, Less., Cent. Zool., p. 215, pl. xxiii, ♂, 1830 (Pegu).

Hemicircus canente, A., p. 127 (Tavoy to Bankasoon); C. ii, p. 30;

Hume, Stray Feathers, ix, 1880, p. 112 (Kasoom).

2 ♀. Tapli, Pakchan Estuary, Peninsular Siam, 2-7 March 1910 (Nos. 4338, 4467).

"Iris reddish or brown; bill black or dark greenish."

Total length 149, 143; wing 93, 91; tail 40, 40; tarsus 16, 16; bill from gape 21, 22 mm.

These specimens, and the one obtained by Darling at Kasoom, are the only records for Peninsular Siam.

291. *Mülleripicus pulverulentus harterti* (Hesse).

Mülleripicus pulverulentus harterti, Hesse, Ornith. Monatsb. xix, 1912, p. 182; id. Mittheil. Zool. Mus. Berlin, vi, 1912, pp. 231,

232 (Pya, Upper Hindwin); I., p. 96 (North Siam).

Mülleripicus pulverulentus, A., p. 133 (Pakchan; Bankasoon; Malewoon).

Alophonerpes pulverulentus, C. ii, p. 29; F., p. 47 (1911); H., p. 95 (Bandon); J., p. 163 (Pulau Lontar and Terutan).

Alophonerpes pulverulentus harterti, Robinson and Kloss, Ibis, 1919, p. 439 (Cochin-China and Annam).

Hemilophus pulverulentus harterti, M., p. 426 (Tung Song and Patiyu).

♀ ad. Hat Sanuk, Rajburi, S. W. Siam, 12 April 1919 (No. 5255).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

"Iris blackish brown; bill pale whitish slate, culmen dark; feet bluish slate."

Total length 485; wing 239; tail 187; tarsus 37; bill from gape 68 mm.

It is unprofitable to discuss the races of this woodpecker until a series from Java is available for comparison. In the meantime we use this name for all the continental birds. The Bornean race, apparently distinct from the present one, has already a name, *M. mülleri* (Bp., Consp. Av. 1, p. 131, 1850), and it is therefore improbable that any mainland form is identical with the Javan one.

Young birds have the bill pale throughout and the throat and foreneck cream. A first year male from Bandon has the forehead washed with red and the foreneck slightly tinged with the same colour.

292. *Thriponax javensis javensis* (Horsf.).

Picus javensis, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 175 (Java).

Picus maximus malayensis, Bland, Journ. Asiat. Soc. Bengal, vi, 1837, p. 952 (Johore).

Thriponax javensis, A., p. 135 (Laynah to Malewoon); C. ii, p. 27; B., p. 72 (Junk Seylon or Puket); F., p. 47 (Trang); Hargitt, Ibis, 1885, p. 148 (Malewoon).

The Trang example (a female shot at Chong on 11th December 1909, wing 222 mm.), is interesting, having a few of the feathers of the rump faintly tipped with white, while Hargitt (Cat. Birds Brit. Mus. xviii, p. 499) records an adult from Malewoon having the rump feathers white with a subterminal band of black. Both birds, of course, show the commencement of gradation to *T. j. feddeni*.

293. *Thriponax javensis feddeni* (Blanf.).

Mülleripicus feddeni, Blanford, Journ. Asiat. Soc. Bengal, xxxii, 1863, p. 75 (Burma, probably Ava); Hargitt, Ibis, 1885, p. 154 (Petchaburi).

Thriponax javensis feddeni, Stresemann, Nov. Zool. xx, 1913, p. 321; L., p. 95 (North Siam).

♀ ad. Koh Lak, Rajburi, S. W. Siam, 9 April 1919 (No. 5187).

I. Gyldestolpe, Kungl. Sy. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

"Iris pale yellow; bill black; feet greenish grey."

Total length 417; wing 216; tail 175; tarsus 30; bill from gape 53 mm.

The present bird is slightly larger than specimens from Cochin-China and Annam, with which we have compared it. It has practically no trace of white tips to the primaries.

The present record is a considerable extension of range for the species, the nearest localities where it has been taken being Petchaburi (U. Bock) and Meklong (H. C. V. Hunter), *vide* Cat. Birds Brit. Mus. xviii, p. 505.

***Picumnus innominatus malayorum* Hartert.**

Picumnus innominatus malayorum, Hartert, Vogel palaarkt. Fauna, 1912, p. 937 (Perak).

Picumnus innominatus, Hargitt, Cat. Birds Brit. Mus. xviii, p. 549 (Thoungyeen river, Tenasserim).

This species is recorded from Tenasserim, as above, while we have it also from Annam and from the Malay States: it is therefore highly probable that it will be met with eventually in the northern half of the Peninsula.

294. *Sasia abnormis abnormis* (Temm.).

Picumnus abnormis, Temminck, Pl. Col. No. 371, fig. 3 (1825) Java.

Sasia abnormis, E., p. 97 (Patani); F., p. 48 (Trang); H., p. 96 (Bandon).

Sasia abnormis everetti, L., p. 102 (Ghirbi).

Sasia abnormis abnormis, Baker, Ibis, 1919, p. 21 (Maprit in Patiyu); M., p. 427 (Tung Song and Patiyu).

We have this species recorded from Patani, Trang, Ghirbi and Bandon, while Baker states that it occurs in Herbert's collection from Maprit, S. W. Siam, so that the ranges of the two species, *S. ochracea* and *S. abnormis*, slightly overlap.

295. *Sasia ochracea reichenowi* Hesse.

Sasia ochracea reichenowi, Hesse, Ornith. Monatsb. xix, 1911, p. 181

(Burma); id. Mitth. Zool. Mus. Berlin, vi, 1912, p. 145 (type

locality, Tavoy); L., p. 97 (North Siam); Baker, Ibis, 1919,

p. 211 (Mergui); K., p. 113 (Lat Bua Kao, E. Siam).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. I & II, 1883.
D. Bonhote, P. Z. S. 1901, Vol. I.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

♀. Mamoh, Pakchan Estuary, Peninsular Siam, 26 February 1919 (No. 4276).

♂. Tapli, Pakchan Estuary, Peninsular Siam, 5 March 1919 (No. 4443).

2 ♂, ♀. Tasan, Chumpon, Peninsular Siam, 15-24 March 1919 (Nos. 4597, 4797, 4846).

"Iris red or reddish, orbits black, blackish red, dark slate or slate; upper mandible black, lower pale grey. or slate, in one case yellow; feet yellow, orange or gamboge."

Total length ♂, 87, 83; ♀, 90, 84; wing ♂, 51, 53; ♀, 54, 55; tail ♂, 24, 24; ♀, 24, 28; tarsus ♂, 12, 13; ♀, 11.5, 13; bill from gape ♂, 16, 14; ♀, 13, 14 mm.

The series detailed above appears to agree well with the diagnosis of the race, which is a paler and brighter form of the typical Nepalese bird, though both forms, according to the describer, are found together in North Cachar. It is unfortunate that, while dealing with the genus critically, Baker has not investigated the status of *S. lacrymosa* Lafresnaye, a name revived by Hesse (*loc. cit. supra*) for a large form from the N. W. Himalayas with a wing 58 mm. and other differences.

It is perhaps worthy of note that our series listed above appears to have darker orbits than other birds of the same race, as recorded by Davison, Gyldenstolpe and Kloss.

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
 J. Robinson, Journ. F.M.S. Mus. vii, 1917.
 K. Kloss, Ibis, 1918.
 L. Robinson and Kloss, Journ. N.H. Soc. Siam, iii, 1919.

- M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
 Baker, Journ. N.H. Soc. Siam, iii, 1919. (second part).
 M. I. Baker, Journ. N.H. Soc. Siam, iv, 1920. (third part).

EURYLÆMIDÆ.

BROADBILLS.

1	{	Nostrils concealed by feathers	..	..	<i>Calypdomena viridis continentis</i>	
		Nostrils exposed	..	..	..	2
2	{	Tail longer than wing	..	..	<i>Psarionus dalhousie</i>	
		Tail shorter than wing	..	..	..	3
3	{	Scapulars lemon-yellow	..	..	..	4
		No yellow on wings	..	..	..	5
4	{	Throat black, fore-neck white, a white collar	..	..	<i>Eurylaimus o. ochromalus</i>	
		Throat and fore-neck greyish vinous, no white collar	..	..	<i>E. javanicus harterti</i>	
5	{	Head black	..	..	..	6
		Head not black	..	..	..	7
6	{	A black band on breast	..	..	<i>Cymborhynchus m. malaccensis</i>	
		No black band on breast	..	..	<i>Corydon sumatranus</i>	
7	{	Tertiaries and secondaries paler, ear-coverts more fulvous	..	..	<i>Serilophus l. lunatus</i>	
		Tertiaries and secondaries darker, ear-coverts more drabby	..	..	<i>S. l. stolidus</i>	

236. *Calypdomena viridis continentis* Rob. and Kloss.

Calypdomena viridis continentis, Robinson and Kloss, Journ. Fed. Malay States Mus. xi, 1923, p. 54 (Isthmus of Kra.).

Calypdomena viridis, A., pp. 86, 409 (Amherst to Malewoon); B., p. 41 (Junk Seylon); C. i, p. 422; E., p. 96 (Patani); F., p. 50 (Trang); H., p. 96 (Bandon); L., p. 85 (Hat Samuk); L., p. 103 (Junk Seylon); M., p. 419 (Tung Song).

♂. Koh Rah, Takuapah, Peninsular Siam, 17 February 1919 (No. 4055).

♀. Tapli, Pakchan Estuary, Peninsular Siam, 5 March 1913 (No. 4430).

♂, 4 ♀. Tasan, Chumporn, Peninsular Siam, 13–15 March 1919 (Nos. 4561, 4568, 4570, 4581, 4598).

“Iris dark; bill sage green, culmen black; feet green.”

Total length ♂, 177, 177; ♀, 197, 192, 197, 185, 198; wing ♂, 106, 100; ♀, 112, 108, 111, 103, 109; tail ♂, 50, 53; ♀, 65, 58, 60, 60, 66; tarsus ♂, 22, 21; ♀, 23, 21, 21.5, 22, 22; bill from gape ♂, 24, 25; ♀,—, 25, 25, 27, 25, mm.

Though this bird, which is distinguished from the typical Sumatran form by the attainment of greater size, has been obtained

A. Harter & Davison, *Swamp Feathers*, vi, 1878.

B. Müller, *Die Ornith. der Insel Salangan*, 1882.

C. *Canton Birds*, Brit. Museum, Vols. i & ii, 1883.

D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, 66 (Birds), 1915.

F. Robinson and Kloss, *Ibis*, 1910 41.

G. Gerdner, *Journ. N. H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

as far north as Amherst in Tenasserim, it has not been recorded from Siam north of Hat Sanuk. In Bandon we found it breeding in June. We have it from Khao Ram, 1200 ft., and Khao Luang, 2000 ft., in Nakon Sri Tamarat. Females seem to run a little larger than males.

***Psarisomus dalhousiæ dalhousiæ* (Jameson).**

Eurylaimus dalhousiæ, Jameson, Edinb. N. Ph. Journ., xviii, 1835, p. 389 (North India).

Psarisomus dalhousiæ, A., p. 499 (Nwalabo).

Though not yet recorded from any locality in the area now dealt with, this bird occurs on Nwalabo, at a height of 3000 ft., and is certain to be secured eventually in the mountains, as it is well known in the Malay States.

297. *Eurylaimus ochromalus ochromalus* Raffles.

Eurylaemus ochromelas, Raffles*, Trans. Linn. Soc. xiii, 1822, p. 297 (Sumatra); A., p. 91 (Laynah to Malewoon); B., p. 42 (Tongkah or Puket); C. i, p. 426; F., p. 50 (Trang); H., p. 97 (Bandon); M., p. 418 (Tung Song).

♀. Tapli, Pakchan Estuary, Peninsular Siam, 3 March 1919 (No. 4390).

♀. Tasan, Chumporn, Peninsular Siam, 14 March 1919 (No. 4583).

"Iris chrome; bill robin's-egg blue, tip of upper mandible green, tomlia black; feet pinkish or purplish flesh."

Total length 167, 160; wing 78, 78; tail 48, 55; tarsus 20.5, 20.5; bill from gape 27, 27 mm.

On the Tenasserim side this species reaches its northern limit at Ye, in about Lat. 15° N. In Peninsular Siam the above specimens are the most northerly recorded.

298. *Eurylaimus javanicus harterti* Van Oort.

Eurylaemus javanicus harterti, Van Oort, Notes Leyden Museum, xxxi, 1909, p. 209 (Sumatra).

Eurylaemus javanicus, A., p. 89 (Nwalabo to Bankasoon); C. i, p. 427; H., p. 96 (Bandon).

* Spelt as above by this author.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, *Ibis*, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

The Sumatran bird, with which the majority of Malayan specimens agree, has been separated from the typical Javan bird, which has yellow under tail-coverts, these being vinaceous in the present form. It is not impossible, however, that the bird from the Lampongs District, South Sumatra, adjacent to the Sunda Straits, belongs to the Javan form.

Though found in the Karen Hills and North Siam, the three specimens from Bandon recorded above, and a pair from Khao Luang, 2000 ft., Nakon Sri Tamarat, 14th March 1922, are the only ones hitherto obtained from Peninsular Siam, where, however, it must be fairly common. The two males now before us differ from a long series of Malayan and Sumatran birds in being paler both above and below.

299. *Corydon sumatranus sumatranus* (Raffles).

Coracias sumatranus, Raffles, Trans. Linn. Soc. xiii, 1822, p. 303 (Sumatra).

Corydon sumatranus, A., p. 97 (Bankasoon and Malewoon); C. i, p. 430; B., p. 43 (Tongkah or Puket); G., p. 149 (Ratburi); I., p. 87 (Koh Lak); L., p. 103 (Puket).

♂, ♀. Tung Pran, Takuatung, Peninsular Siam, 14 February 1919 (Nos. 4017, 4018).

3 ♀. Tasan, Chumporn, Peninsular Siam, 13-22 March 1919 (Nos. 4562, 4753, 4787).

2 ♂. Hat Samuk, Rajburi, Peninsular Siam, 16 April 1919 (Nos. 5341-2).

"Iris dark hazel or black; bill and orbits pinkish horn; feet black or brownish black."

Total length ♂, 271, 278, 272; ♀, 270, 272, 266, 272; wing ♂, 134, 138, 132; ♀, 131, 129, 135, 136; tail ♂, 98, 105, 105; ♀, 98, 102, 109, 103; tarsus ♂, 26, 27.5, 26; ♀, 26, 28, 28, 28; bill from gape ♂, 41, 40, 38; ♀, 42, 40, 39, 39 mm.

Continental and Sumatran birds do not differ. Bornean birds have the general colour dark sepia brown instead of dull black, and

A. Hume & Davison, *Stray Feathers*, vi, 1878.

B. Müller, *Die Ornithologie der Insel Salanga*, 1882.

C. Oates, *Birds Brit. Burmah*, Vols. i & ii, 1883.

D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

have been named *Corydon sumatranus brunnescens* (Hartert, Bull. Brit. Orn. Club, xxxvii, 1916, p. 4). Fairly common in Peninsular Siam, extending northwards to Chiengmai and the Karen Hills.

Fresh skins have the concealed back spot almost invariably fiery orange or scarlet, which in many cases fades to apricot or pinkish yellow.

300. *Serilophus lunatus lunatus* (Gould.).

Eurylaimus lunatus, Gould, P. Z. S. 1833, p. 133 (Rangoon).

Serilophus lunatus, A., p. 89 (Nwalabo); C. i, p. 424; Salvad. Ann.

Mus. Civ. Gen. (2) v, 1888, p. 574 (Tenasserim); id. op. cit. (2) vii, 1889, p. 383 (Karen).

Serilophus lunatus lunatus, M., p. 419 (partim: Patiyu and S. E. Siam).

4 ♂, 6 ♀. Tapli, Pakehan Estuary, Peninsular Siam, 1-7 March 1919 (Nos. 4338, 4361-5, 4374, 4380, 4480-1).

♂. Tasan, Chumporn, Peninsular Siam, 27 March 1919 (No. 4909).

"Iris greyish green or dull green, orbits greenish yellow; bill pale blue, tomlia whitish, gape and base deep chrome; feet oil-green, claws pale blue."

Total length ♂, 168, 164, 177, 170, -; ♀, 176, 168, 170, 172, 180, 165; wing ♂, 81, 87, 87, 87, -; ♀, 87, 85, 82, 85, 86, 85; tail ♂, 73, 67, 68, 65, -; ♀, 70, 68, 68, 68, 65, 70; tarsus ♂, 20, 18, 18, 17, -; ♀, 17, 18, 21, 20, 18, 18; bill from gape ♂, 21, 22.5, 22, 22, -; ♀, 21.5, 21.5, 23, 23, 23, 23 mm.

This bird was found to be very abundant in dry bamboo jungle at Tapli, flying in flocks of five or six individuals and, as Davison notes, not at all easy to alarm. At Tasan in deeper, more evergreen, jungle it was much rarer, and at other places we did not come across it at all.

Davison did not collect it on the Pakehan, nor did Oates's collectors, so that the present series is a considerable extension of range for the form.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, This, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

301. *Serilophus lunatus stolidus* Rob. & Kloss.

Serilophus lunatus stolidus, Robinson and Kloss, Bull. B. O. C. xl, 1919, p. 16 (Khao Nawng, Bandon).

Serilophus lunatus, H., p. 97 (Khao Nawng, Bandon).

Serilophus lunatus lunatus, M., p. 419 (partim : Tung Song).

This form, based on five examples from the central part of Peninsular Siam, differs from the more northern race (*antea*) in having deeper coloured inner secondaries and tertiaries and less fulvous ear-coverts. From *S. l. rothschildi*, of the Federated Malay States, which may also occur in the south, it is separated by the more fulvous, less grey, crown and ear-coverts and paler rump and secondaries.

302. *Cymborhynchus macrorhynchus malaccensis* Salvad.

Cymborhynchus malaccensis, Salvad. Atti. R. Acad. Tor. ix, 1874, p. 425 (Malacca); F., p. 50 (Trang); H., p. 96 (Bandon).

Cymborhynchus macrorhynchus, A., pp. 92-5 (Tavoy to Maleewoon); C. i, p. 428; B., p. 42 (Tongkah or Puket); D., p. 68 (Patani); G., pp. 39, 149 (Rajburi and Petchaburi).

Cymborhynchus macrorhynchus lemniscatus, I., p. 87 (Hat Sanuk).

Cymborhynchus macrorhynchus malaccensis, L., p. 103 (Ghirbi); M., p. 419 (Tung Song).

2 ♀. Tung Pran, Takuatung, Peninsular Siam, 14 February 1919 (Nos. 4013-4).

♂, ♀. Renong river, Peninsular Siam, 22 February 1919 (Nos. 4163-4).

♀. Mamoh, Pakchan Estuary, Peninsular Siam, 27 February 1919 (No. 4292).

3 ♂. Tapli, Pakchan Estuary, Peninsular Siam, 2-9 March 1919 (Nos. 4366, 4446, 4527).

♂, ♀. Tasan, Chumporn, Peninsular Siam, 21-22 March 1919 (Nos. 4733, 4783).

♂, ♀. Hat Sanuk, Rajburi, Peninsular Siam, 15 April 1919 (Nos. 5324-5).

"Iris emerald; bill robin's-egg blue, lower mandible mostly chrome; feet purplish blue."

A. Hume & Davison, *Stray Feathers*, vi, 1878.

B. Müller, *Die Ornith. der Insel Salanga*, 1882.

C. Oates, *Birds, Brit. Burmah*, Vols. i & ii, 1883.

D. Bonhote, *P.Z.S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, *Journ. N.H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F.M.S. Museums*, v, 1915.

Total length ♂, 208 (app.), 225, 213, 216, 225, 218; ♀, 213, 220, 217, 208, 212, 223; wing ♂, 97, 98, 100, 96, 99, 100; ♀, 101, 96, 96, 97, 98, 99; tail ♂, 84 (app.), 87, 85, 93, 93, 90; ♀, 93, 95, 88, 93, 87, 90; tarsus ♂, 23, 26, 23, 24, 24, 24; ♀, 24, 24, 22.5, 24, 25, 22; bill from gape ♂, 31, 29, 30, 29, 30, 33 (?); ♀, 29, 28, 31, 28.5, 29, 29 mm.

Consistently common in every suitable locality visited in Peninsular Siam, affecting chiefly bamboo jungle near water; not as a rule found near the sea or in the mangrove zone.

The races of this Broadbill have recently been discussed *ad nauseam*, but after all little has been elicited that has not appeared in Hume and Davison's classic paper. Broadly speaking it may be stated that there is a progressive increase in the amount of white on the tail as we proceed northwards. Bornean birds have least, and to this locality the name *Cymborhynchus macrorhynchus macrorhynchus* is attached, though it is by no means certain that it properly applies: West Sumatran birds are next; and if distinct, will have to be called *C. m. lemniscatus* Raffles, while the continental birds south of Aracan are *C. m. malaccensis*. The present series have white on the four outer pairs of tail feathers; one male from Tasan has it on five, one female from Tasan on three pairs only.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).
Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

ADDENDA AND CORRIGENDA, VOL. V. PAGES 1-207.

- Page 2, line 2 from bottom. *For the third word read*:—British.
- Page 3. Hume's three papers on "The Birds of the Western Half of the Malay Peninsula (Stray Feathers, viii, 1879, pp. 37-72, 151-163; op. cit. ix, 1880, pp. 107-132) have not been mentioned in the synonymy as fully as they should have been: they contain references to many birds from Peninsular Siam.
- Page 16, bracket 15. *For Tropicoperdix in the last two entries read*:—*Tropicoperdix*.
- Page 17, No. 1. The Francolin of Southern Indo-China will possibly have to be known, on account of smaller size than the Chinese bird, as *Francolinus pintadeanus phayrei* Blyth (Journ. Asiat. Soc. Bengal, xii, 1843, p. 1011; id. op. cit. xxiv, 1855, p. 480. Pegu). See Bangs, Bull. Amer. Mus. Nat. Hist. xlv, 1921, p. 576.
- Do. No. 2. *Read*:—*Rhizothera longirostris longirostris* (Temm.).
- Page 20, line 2. *For p. 25 read*:—p. 28 (Penang).
The type of *Phasianus castaneus* Gray was, therefore, almost certainly an imported bird.
- Page 22, line 1. *For 532 read 632*.
- Page 23, No. 15. If the bird of the Malay Peninsula differs from other races, with which we have not been able to compare it, it will be known as:—
Turnix pugnax atrogularis (Eyton).
Hemipodius atrogularis, Eyton, P. Z. S. 1839, p. 107. Malay Peninsula.
- Page 29, No. 20. *Treron bisincta domvillii* of Hainan has wings (*fide* Hartert *in litt.*), ♂♂ 155, 162, 163, 163, 164, 165; ♀♀ 151, 152, 155 mm.
We associate birds from E. and S. E. Siam with the small Javanese race, *T. b. javana* Rob. and Kloss (Journ. Fed. Malay States Mus. xi, 1923, p. 53).
- Page 31, No. 23. Mr. W. J. F. Williamson has a pair of *Treron olax* obtained at Naihoot, Langsuan, thus considerably increasing the northern range of the species in the Peninsula.

Page 44, No. 43. Read:—*Porphyrio calvus viridis* Begbie.

Porphyrio viridis, Begbie, The Malayan Peninsula, 1834, p. 515 (Malacca).

Elliot's name for Saigon and Bangkok birds, *P. edwardsi*, will have to rank as a synonym of *P. viridis*, an overlooked name which antedates it by many years. Hume determined a Selangor specimen as "not *calvus*, but Elliot's new Siamese species." We now have specimens from the Malay States which we find to be the same as birds from Chainat, near Bangkok. All these differ from typical *calvus* of Java and Sumatra by having a considerable amount of grey on the head and by larger size. A large series of *P. c. calvus* has wings 210–230 mm: the wings of continental specimens known to us measure from 240 to 275 mm.

Page 45. For *Podicepedidae* read:—*Podicipidae*.

Do. No. 44. Read:—*Podiceps ruficollis philippensis* (Bonn.)

Olymbus fluxiatilis Tunstall, is antedated by *C. ruficollis* Pallas.

Page 47, bracket 10. Read:—

Large, wing over 11 inches	..	..	..	11
Medium, wing between 8 and 11 inches	..	..	..	12
Small, wing less than 8 inches	..	..	..	15

Do. bracket 15.

For *S. sinensis* read:—*S. albifrons sinensis*.

, *S. minuta* ,, *S. a. albifrons*.

, *S. saundersi* ,, *S. a. saundersi*.

Page 48, No. 46. An earlier name for this tern is *Hydrochelidon leucopareia* (Temm.).

Sterna leucopareia, Temm., Man. d' Orn. ii, 1820, p. 746 (Hungary).

Birds from Java, India and China have received the names of *javanica* Horsf., *indica* Stephens, and *swinhoei* Mathews, respectively, but we are not in a position to determine Siamese birds subspecifically. Mathews considers them to be *H. l. javanica* (Horsf.).

Do. No. 47. Horsfield named a Javanese specimen *Sterna grisea*, and Mathews thinks that this name should be used for the birds of S. E. Asia. Hartert only recognises the typical form.

ADDENDA AND CORRIGENDA (SECOND LIST).

Page 211, line 2. For *nilocita* read :—*nilotica*.

Do., line 5 from bottom. *Before* Scopoli *insert* :—*Sterna pileata*.

Page 49, No. 48. Read:—*Hydroprogne caspia caspia* (Pall.).

Do. No. 49. Read:—*Geochelidon nilocita* (Gm.).

Sterna nilotica, Gmelin, Syst. Nat. ii, 1789, p. 606 (Egypt).

Some authors regard the form of S. E. Asia as distinct and call it *G. n. affinis* (Horsf.). Type locality Java.

Page 50. For *Sterna media* read:—*Sterna bengalensis bengalensis* Less.

Sterna media Horsf. is preoccupied by *Sterna media* Vieill., and this species must therefore be known as *Sterna bengalensis* Less. (Traité d' Orn. 1831, p. 621, Indian Coasts). Local birds appear to belong to the typical race and are, therefore, *S. b. bengalensis*.

Do. No. 52. Read:—*Sterna hirundo* Linn.

Sterna hirundo, Linn., Syst. Nat. i, 1758, p. 137 (Europe).

This name considerably antedates *Sterna fluviatilis* Nauman.

The Asiatic form is *S. hirundo tibetana*, but the European race, *S. h. hirundo*, is reported to occur in the Malay Peninsula in winter. As noted, the material we have examined is inadequate for subspecific determination.

Page 52, No. 55. Read:—*Sterna albifrons sinensis* Gm.

Page 53. For *Sterna minuta* read:—*Sterna albifrons albifrons* Pall.

Sterna albifrons, Pallas, Vroeg's Cat. Vers. Vog. Adumbr. 1764, p. 6 (Holland).

The name *Sterna minuta* is antedated by the one above given.

Do. For *Sterna saundersi* read:—*Sterna albifrons saundersi* Hume.

Do. For *Anous stolidus* (Linn.) read:—*Anous stolidus pileatus* (Scop.).

Scopoli, Del. Faun. & Flor. Insubr. ii, 1776, p. 92 (Philippines).

Eastern Asiatic birds differ from the typical Atlantic form.

Page 54, bracket 12. For *Squatarola helvetica* read:—*Squatarola s. hypomelus*.

Page 54, bracket 16. For *Aegialites geoffroyi* read:—*Aegialites leschenaulti*.

Page 55, bracket 23. For *Macrorhamphus g. taczanowskii* read:—*Macrorhamphus g. semipalmatus*.

Do. bracket 24. Reverse the names (the bird with the tail not barred is *L. l. melanuroides*), and for *L. lapponica novae-zelandiae* read:—*L. lapponica baueri*.

Do. bracket 30. For *Totanus calidris* read:—*Totanus t. eurhinus*; and for *Totanus fuscus* read:—*Totanus erythropus*.

Do. bracket 37. Delete the numbers 9 and 7.

Do. bracket 39. For *Ancylochilus subarquatus* read:—*Ancylochilus ferrugineus*; and for *Limicola platyrhyncha* read:—*Limicola falcinellus sibirica*.

Page 56, bracket 40. For *Rostratula capensis* read:—*Rostratula b. benghalensis*.

Page 59, No. 61. Read:—*Arenaria interpres interpres* (Linn.).

Page 60, No. 64. Read:—*Squatarola squatarola hypomelus* (Pall.).
Charadrius hypomelus, Pallas, Reis. Russ. Re'ch. iii, 1766, p. 699 (Siberia).

Tringa squatarola Linn. antedates *Tringa helvetica* Linn., and eastern birds differ from the typical western form.

Do. No. 65. Read:—*Charadrius apricarius fulvus* Gm.

Do. No. 66. Read:—*Aegialites leschenaulti* (Less.).

Charadrius leschenaulti, Lesson, Dict. Sci. Nat. xlii, 1826, p. 36 (Pondicherry).

This name antedates *geoffroyi* (Wagler).

Page 61, No. 67. Read:—*Aegialites mongolus mongolus* (Pall.).

For *Ae. pyrrothorax* (in text) read:—*Ae. mongolus atrifrons* (Wagler)—[an earlier name].

Page 64, No. 73. Read:—*Macrorhamphus griseus semipalmatus* Jerdon.

Macrorhamphus semipalmatus, Jerdon in Blyth, Journ. Asiat. Soc. Bengal, xvii, 1848, p. 252 (Calcutta).

The name antedates *taczanowskii*.

Page 64, No. 74. For *Limosa lapponica novae-zelandiae* Gray read :—*Limosa lapponica baueri* Nauman.

Limosa baueri, Nauman, Vog. Deutschl. viii, 1836, p. 429 (New Holland ; i.e., Victoria).

This name has priority over *novae-zelandiae*.

Page 65. *Totanus ochropus* becomes No. 75 A. We have recently seen specimens in Mr. Williamson's collection from Nong Kae, S. W. Siam.

Do. No. 77. Read :—*Totanus totanus eurhinus* Oberh.

Oberholser, Proc. U. S. Nat. Mus. xxii, 1900, p. 217 (Ladak).

Scolopax totanus Linn. antedates *Scolopax calidris* Linn., while the Eastern Asiatic bird differs from the typical western one.

Page 66, No. 78. Read :—*Totanus erythropus* (Pall.).

Scolopax erythropus, Pallas, Adumbr. Vroeg's Cat. d' Ois. Quad. & d' Ins., 1764, p. 6 (Holland).

This name has priority over *fuscus*.

Page 68, No. 84. For *Erobia* in the synonymy read :—*Erolia*.

Do. *Limonites temmincki* becomes No. 84 A. A male was obtained at Koh Lak, S. W. Siam, in December 1921 by Mr. W. J. F. Williamson.

Do. No. 86. Read :—*Ancylochilus ferrugineus* (Brünn.).

Tringa ferruginea, Brünnich, Orn. Bor. 1764, p. 53 (Iceland).

This name has priority over *subarquatus*.

Page 69, No. 87. Read :—*Limicola falcinella sibirica* (Dresser).

Limicola sibirica, Dresser, P. Z. S, 1876, p. 674 (Siberia).

S. Falcinellus Pontop. antedates *T. platyrincha* Temm., while eastern birds differ from the typical western form.

Do. No. 88. Read :—*Rostratula benghalensis benghalensis* (Linn.).

Rallus benghalensis, Linn. Syst. Nat. i, 1758, p. 153 (Asia).

An older name for the species.

Page 70, No. 90. For *sthenura* read :—*stenura*.

Page 78, No. 104. Tavoy birds may be the subspecies *H. a. modesta* (Gray. *Ardea modesta*, Zool. Misc. 1831, p. 19. India).

Do. No. 105. Read :—*Mesophoyx intermedia intermedia* (Wagl.).

Page 79, No. 107. Read:—*Demiegretta sacra sacra* (Gm.).

Do. do., line 2 of synonymy. For I. read:—A.

Do. For *Nycticorax nycticorax* read:—*Nycticorax nycticorax nycticorax* (Linn.).

Do. No. 108. Insert as first item in the synonymy:—

Ardea melanolopha, Raffles, Trans. Linn. Soc. xiii, 1822, p. 326 (Sumatra).

Page 80, No. 109. Read:—*Butorides striatus javanicus* (Horsf.).

Do. No. 112. Read:—*Bubulcus ibis coromandus* (Bodd.).

Page 81, No. 113. Read:—*Ardetta sinensis sinensis* (Gm.).

Page 85, For *Plotus melanogaster* read:—*Plotus rufus melanogaster* (Penn.).

Do. No. 124. Read:—*Phalacrocorax carbo* (Linn.).

Tickell's name *Carbo albiventer* is preoccupied and the Siamese bird is probably *P. c. sinensis* (*Pelecanus sinensis* Shaw and Nodder, Nat. Misc. xiii, 1801, pl. 529 and text. China), with which, according to Ticehurst (*Ibis*, 1923, p. 458) *P. c. indicus* Mathews is synonymous.

Page 86. For *Pelecanus roseus* read:—*Pelecanus onocrotalus roseus* Gm.

Page 89, bracket 6. Read:—*Cerchneis tinnunculus*.

Page 90, bracket 17. Insert no before scutellae.

Do. bracket 18. For $\frac{1}{2}$ in both lines read:— $1\frac{1}{2}$

Page 91, No. 128. Read:—*Baza leuphotes* (Dumont).

Falco leuphotes, Dumont, Dict. Sci. Nat. xvii. 1820, p. 217 (Pondicherry).

On further consideration of our series of fourteen specimens, southwards from the Isthmus of Kra in the Malay Peninsula, we find ourselves in agreement with Swann's view as to *B. l. burmana* being only a synonym of *B. leuphotes* (Syn. Accipitres, ed. 2, 1922, p. 167). Only two of our specimens have chestnut on the scapulars and these also have chestnut breast-bands, the individual having most chestnut on the scapulars having the brightest chestnut breast and being of small size. The remaining twelve have scapulars black and white: two of them have pure black breast-bands;

in the rest the breast-band varies from chestnut-black to blackish chestnut. Swann seems correct in stating that *B. l. burmana* has been arrived at through comparing adult Burmese birds with immature Indian ones.

Page 92, No. 129 Read :—*Baza jerdoni jerdoni* (Blyth).

No. 131. Read :—*Cerchneis tinnunculus* subsp.

It is probable that all the specimens mentioned are examples of *Cerchneis tinnunculus dorriesi*, the Siberian Kestrel, which Swann states has a much longer tail than in other forms (♂ 172–194; ♀ 178–200 mm.).

Other races to be considered in connection with S. W. and Peninsular Siam, having regard to the distribution given by Swann (Syn. Accip. ed. 2, p. 216), are *C. t. interstinctus* McClell. (of which *saturatus* Blyth is a synonym), the Assamese Kestrel, visiting the Malay Peninsula in winter; and perhaps *C. t. japonicus* (Temm. and Schleg.), the Japanese Kestrel, known in winter from Hainan, the Philippines and Borneo.

Page 93, line 4. For 445 read :—44.5.

Page 94, No. 134. Add to the synonymy :—

Pernis brachypterus, Hume, Stray Feathers, ix, 1880, p. 122 (Malacca).

Pernis tweeddalei, Hume, tom. cit., p. 446; Gurney, tom. cit., p. 446, Hume, op. cit. x, 1887, p. 513 and plate (Malacca).

Pernis apivorus orientalis, Tacz., the Siberian form of the Crestless Honey Buzzard, may occur, as it travels south as far as the Sunda Islands in winter.

The common bird in the Malay Peninsula is undoubtedly *P. pt. ptilorhynchus*; but it may be visited in winter by the North Indian race, *P. pt. ruficollis*, and the Siberian form, *P. a. orientalis*.

Page 99, No. 143, line 2. For (Java) read :—(Sumatra, *fide* Oberholser).

Do. Do. Add to the synonymy :—

Spilornis cheela malayensis, Swann, Syn. List. Accipitr, 1920, p. 83 (Pahang).

It may be just possible to maintain Javanese birds as *S. c. bido* (Horsf.) on account of very slightly darker colour, but this character is not constant and, as we have stated, Javanese examples can be matched by specimens from other parts of Malaysia.

Page 99, Add:—

143. A. *Spilornis cheela rutherfordi* Swinh.

Spilornis rutherfordi, Swinhoe, Ibis, 1870, p. 85 (Hainan); A., p. 14 (Tavoy); C. ii, p. 194 (*partim*, Tenasserim and Siam).

Spilornis cheela, G., p. 151 (Ratburi or Petchaburi).

Spilornis bacha, L., p. 128 (Huey Sai near Koh Lak).

Spilornis cheela floweri, Swann, Syn. List. Accipitr., 1920, p. 81 (Tahkamen, Central Siam).

♂. Koh Lak, S. W. Siam, 6 April 1919 (No. 5119).

"Iris chrome; bill grey, tip black, cere and base yellow; feet greenish grey."

Total length 610, wing 425, tail 270, tarsus 100, bill from gape 45 mm.

The Koh Lak example agrees with birds from Cochin-China.

This race only differs from *S. c. bassus* in being larger: there are no colour distinctions.

Page 101, No. 148. Read:—*Milvus lineatus* (Gray).

Haliaeetus lineatus, Gray, Hardwicke's Ill. Ind. Zool. i, 1832, p. 1, pl. 11 (China).

This is an earlier name for *M. melanotis*.

Page 105. *Accipiter nisus* subsp. For p. 22, in synonymy, read, p. 29.

Page 108, No. 159. Read:—*Tyto alba javanica* (Gm.).

Page 109, No. 163. Read:—*Ketupa ketupu ketupu* (Horsf.).

Page 111, No. 166. Read:—*Otus luciae siamensis* Rob. and Kloss, Journ. Fed. Malay States Mus. x, 1922 p. 261 (Khao Nong, Bandon, 3500 ft: also from Khao Luang, Nakon Sri Tamarat, 5000 ft.).

Page 116, No. 178. Read:—*Palaeornis cyanocephalus bengalensis* (Forst.).

Psittacus bengalensis, Forst., Ind. Zool. 1781, p. 40 (Bengal).

Forster's name has precedence of Boddaert's.

Page 121, bracket 2. For *Ceyx t. tridactylus* read :—*Ceyx e. erithaca*.

Page 125, No. 191. For *Ceyx tridactylus tridactylus* (Pall.) read :—

Ceyx erithaca erithaca (Linn.).

Alcedo erithaca, Linn., Syst. Nat. i, 1758, p. 115 (Bengal).

Laubmann has shown (Orn. Monatsb. xxxi, 1923, p. 89) that this species must be known by Linneus's name, which is eleven years earlier than that of Pallas.

Page 143. For *Apidae* read :—*Micropodidae*.

Page 144, No. 223. For *Apus* read :—*Micropus*.

Page 145, No. 224. For *Apus* read :—*Micropus*.

Page 149, bracket 4. For *Cuculus canorus bakeri* read :—*Cuculus optatus*.

Page 152. For No. 240 read :—

Cuculus optatus Gould.

Cuculus optatus, Gould, P. Z. S. 1845, p. 18 (North Australia);

Hartert, Vog. palaarkt. Fauna, 1912, p. 949 (Malay Peninsula).

(Specimen and details as recorded).

The advent of a second example of this species from Sumatra (♂, wing 198 mm.) has caused us to reconsider our determination; and Dr. Hartert who has examined the specimens agrees with us that they are *C. optatus*. Though very like *C. canorus* this species is too small to belong to either of the two Asiatic local races, *C. c. bakeri* and *C. c. telephonus*. It has nothing to do with *C. micropterus*, etc.

Page 154, No. 247. We should have stated that the wing lengths of *E. s. scolopacea* given by Hartert are those of males only: thus our males have wings only 1 mm. more than Hartert's maximum. Without doubt, however, they are properly determined as *E. s. malayana*, for in a series of both sexes from Central and Eastern Siam, the wings range from 198 to 222 mm.; and with the exception of three specimens (wings 190, 196, 196) a large series of Malay Peninsula males have wings 197–212. mm.

Page 159, bracket 7. *Read at end of second line:—.....8.*

Page 166, No. 262, line 1. For *faiostratus faiostratus* read:—**faiostriatus faiostriatus.**

Page 180, line 4. For *micropterus* read:—*microlerus.*

Page 200, No. 294, last word of text. For *overlap* read:—*overlap.*

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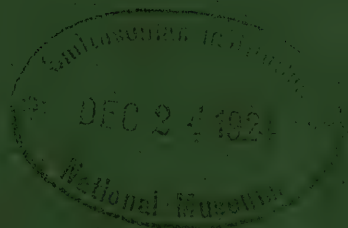
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THE BIRDS OF SOUTH-WEST AND PENINSULAR SIAM.

BY HERBERT C. ROBINSON, C.M.Z.S., M.B.O.U.,

AND

CECIL BODEN KLOSS, F.Z.S., M.B.O.U..

(Continued from page 218).

[The publication of this paper has been much postponed by printing difficulties. The whole of it was completed in 1921, but the delay has enabled us to include the localities of a collection of birds obtained in Nakon Sri Tamarat in the early months of 1922 (for a nominal list of the species, vide Journal of the Federated Malay States Museums, xi, April 1923, part 1, pp. 58-63) and to give references to a few recent publications].

PASSERIFORMES.

PITTIDAE.

PITTAS OR GROUND-THRUSHES.

1	{ Size larger, wing over 5.5 inches	<i>Pitta c. caerulea.</i>	
	{ Size smaller, wing less than 5 inches .. .. .	.. .. .	2
2	{ Lower abdomen red .. .. .	.. .. .	3
	{ Lower abdomen not red .. .. .	.. .. .	6
3	{ Crown red	<i>P. granatina coccinea.</i>	
	{ Crown brown .. .. .	.. .. .	4
4	{ Breast and flanks green	<i>P. sordida cucullata.</i>	
	{ Breast and flanks pale brown .. .. .	.. .. .	5
	{ Coronal stripe obsolete, bill from gape more than 1.4 inches	<i>P. megarhyncha.</i>	
5	{ A marked black coronal stripe, bill from gape less than 1.25 inches	<i>P. cyanoptera.</i>	
6	{ Occipito-nuchal area not red	<i>Eucichla gurneyi.</i>	
	{ Occipito-nuchal area red or flame colour .. .. .	.. .. .	7
	{ No yellow on head and neck, cheeks and earcoverts fulvous	<i>Pitta cyanea</i> ..	
7	{ With yellow on head and neck, cheeks and earcoverts black	<i>Eucichla cyanura irena.</i>	

303. *Pitta caerulea caerulea* (Raffles).

Myiothera caerulea, Raffles, Trans. Linn. Soc. xiii, 1822, p. 301 (Sumatra).

Pitta caerulea, A., pp. 238, 510 (Nwalabo and Bankasoon); F., p. 48 (Trang).

Pitta caerulea caerulea, M., p. 417 (Patiyu).

Brachyurus davisoni, Hume, Stray Feathers, iii, 1875, p. 321 (Hills between Tenasserim and Siam).

♂, ♀. Tasan, Chumporn, Peninsular Siam, 16-23 March 1919 (Nos. 4620, 4790).

"Male, iris grey; bill black; feet pale grey-brown. Female, iris dark hazel; bill black, whitish horn at base and tip; feet dull lavender".

Total length ♂, 265; ♀, 265; wing ♂, 148; ♀, 155; tail ♂, 73; ♀, 70; tarsus ♂, 54.5; ♀, 57; bill from gape ♂, 41; ♀, 41 mm.

The male when shot was engaged in eating a small snake.

In the south of the Peninsula very little is known about this species and we have only secured it once: in the north it is commoner, as we have several specimens from the interior of Trang and a half-fledged bird from Perlis.

Our male specimens from the North agree with the descriptions of *Brachyurus davisoni* and with that in the Catalogue of Birds, xiv, p. 417, in having the anterior part of the crown whitish ashy with a greenish gloss, irregularly barred with black; but a bird from Western Pahang has the crown black almost up to the lores, and the paler crown is, we think, only evidence of slight immaturity.

Stuart Baker has described the Bornean form (types from Mt. Dulit, Baram) as *Pitta caerulea hosei*.*

Pitta granatina coccinea Eyton.

Pitta coccinea, Eyton, P. Z. S. 1839, p. 104 (Malacca); A., p. 511 (foot of Nwalabo).

Eucichla coccinea, C. i, p. 417 (Nwalabo).

This bird has frequently been taken in the Malay States, and, as its occurrence on Nwalabo shows, extends northwards beyond their limits.

* Bull. Brit. Orn. Club, xxxix, 1918, p. 20.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhot, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

304. *Pitta sordida cucullata* Hartl.

Pitta cucullata, Hartl., Rev. Zool. 1842, p. 65 (Malacca'; A., pp. 243, 512 (Tavoy to Malewoon); F., p. 49 (Trang); G., p. 149 (Ratburi and Petchaburi); H., p. 97 (Bandon).

♂, ♀. Hat Sanuk, Rajaburi, Peninsular Siam, 13-15 April 1919 (Nos. 5269, 5322).

"Iris dark; bill black; feet purplish flesh".

Total length ♂, 168; ♀, 173; wing ♂, 110; ♀, 110; tail ♂, 43; ♀, 46; tarsus ♂, 40; ♀, 38; bill from gape ♂, 27.5; ♀, 27 mm.

Never very abundant at any time in the Malay Peninsula, and probably not resident throughout the year as it is known to migrate southwards down the Straits of Malacca in October, November and the early part of December.

As the name for the species, *Turdus sordidus* Müller, has priority over the better known *Pitta atricapilla* Lesson (vide Oberholser, Proc. Biol. Soc. Washington, 32, 1919, p. 239), we have here adopted it.

305. *Pitta megarhyncha* Schleg.

Pitta megarhyncha, Schleg., Vog. Nederl. Ind. 1863, Het Geslacht Pitta, p. 11, pl. 4, fig. 2 (Banka); A., p. 242 (Tavoy to Choulai Creek); C i, p. 416 (Fenasserim); F, p. 48 (Trang); J., p. 167 (Langkawi and Terutau).

♂. Pangnga River, Peninsular Siam, 11 February 1919 (No. 3946).

"Bill black; feet purplish lavender".

Wing 117; tarsus 38; bill from gape 37.5 mm. (measured dry).

Shot among mangroves, outside which this species, at any rate in our experience, is never found. Davison and Oates give no account of the type of forest frequented by the specimens they obtained.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

306. *Pitta cyanoptera* Temm.

Pitta cyanoptera, Temm., Pl. Col. 1823, pl. 218 (Java); E., p. 94 (Patani); F., p. 48 (Trang); G., p. 149 (Ratburi and Petchaburi); H., pp. 97, 147 (Bandon and Koh Samui).
Pitta moluccensis, A., p. 240 (Tavoy to Malewoon).

♂. Hat Sanuk, Rajaburi, Peninsular Siam, 18 April 1919 (No. 5393).

"Iris dark; bill black; feet mauve".

Total length 201; wing 119; tail 52; tarsus 40; bill from gape 31 mm.

Pitta cyanea Blyth.

Pitta cyanea, Blyth, Journ. Asiat. Soc. Bengal, xii, 1843, p. 1008 (Aracan); A., p. 238 (Tavoy); C. i, p. 419 (Tavoy); G., p. 149 (Ratburi and Petchaburi).

This species scarcely enters our area unless Mr. Gairdner's record is of a bird from Petchaburi.

307. *Eucichla gurneyi* (Hume).

Pitta gurneyi, Hume, Stray Feathers, iii, 1875, p. 296, pl. iii (South Tenasserim); A., p. 244 (Laynah to Malewoon).
Eucichla gurneyi, C. i, p. 418 (South Tenasserim and Tongka); F., p. 49 (Trang); H., p. 97 (Bandon); I., p. 85 (Koh Lak).

4 ♂, 3 ♀. Tasan, Chumporn, Peninsular Siam, 15-22 March 1919 (Nos. 4616, 4659, 4667-8, 4708-9, 4770).

"Iris dark hazel; bill black; feet pale or dull pale brownish flesh".

Total length ♂, 210, 203, 213, 212; ♀, 192, 208, 212; wing ♂, 107, 102, 106, 104; ♀, 102, 102, 103; tail ♂, 60, 57, 61, 58; ♀, 50, 57, 56; tarsus ♂, 40, 38, 40, 39; ♀, 36, 40, 37; bill from gape ♂, 28, 29, 29.5, 28; ♀, 25, 29, 27 mm.

Davison in his admirable notes on this species seems to consider that it is partially migratory, as certain members of the genus undoubtedly are: whether this is so we are unable to say; but wherever we have met with it we have found it equally common; in Trang in December and January, in the present locality in March,

A. Hume & Davison, Stray Feathers, vi, 1876.
 B. Müller, Die Ornith. der Insel Salanga, 1882.
 C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
 D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fascioli Malayenses, iii (Birds), 1905.
 F. Robinson and Kloss, Ibis, 1910-11.
 G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
 H. Robinson, Journ. F. M. S. Museums, v, 1915.

and in Bandon in June and July. How far north it extends is not at present known. Gyldenstolpe's specimen from Koh Lak is the most northerly record; Trang is probably near its southerly limit as it almost certainly does not occur in Perlis.

308. *Eucichla cyanura irena* (Temm.).

Pitta irena, Temm., Pl. Col., no plate, text opposite Pl. 591 (Sumatra).

Pitta boschi, Muell. and Schleg., Verhandelingen, article Pitta, pp. 5, 16, Pl. i (1839-44); M., p. 418 (Patiyu).

Eucichla boschi, F., p. 49 (Trang); H., p. 97 (Bandon).

♂, ♀ ad. Tasan, Chumporn, Peninsular Siam, 17-26 March 1919 (Nos. 4643, 4859).

"Iris dark or dark hazel; bill black; feet lavender".

Total length ♂, 212; ♀, 212; wing ♂, 102; ♀, 104; tail ♂, 64; ♀, 65; tarsus ♂, 39; ♀, 41; bill from gape ♂, 29, ♀ 27 mm.

We have not been able to compare these with toptotypical Sumatran specimens: they differ, however, in no way from specimens from the South Malay Peninsula. Older males become more uniform on the sides of the chest and tend to lose the orange barrings.

These are the most northerly specimens on record; the species has not yet been recorded from the Indian Empire but is certain to be found in Southern Tenasserim, the present locality being very few miles from the border. The bird is most strictly associated with limestone hills such as are found throughout the Malay Peninsula on both sides of the main range, and we know of no specimens which have been obtained more than a very few miles from such hills. The association is correlated with the presence of certain species of shells on the limestone, which constitute the principal article of food of these birds.

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|---|--|
| I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916. | M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first part). |
| J. Robinson, Journ. F. M. S. Mus. vii, 1917. | Baker, Journ. N. H. Soc. Siam, iii, 1919.
(second part). |
| K. Kloss, Ibis, 1918. | M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.
(third part). |
| L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919. | |

HIRUNDIDAE.

SWALLOWS.

1	{ Tail short and little forked ; bill broader ..	<i>Hirundo j. javanica</i> .	
	{ Tail long and much forked ; bill narrower ..	.. ..	2
2	{ Rump not chestnut .. ..	.. ..	3
	{ Rump chestnut .. ..	.. ..	5
3	{ Under parts chestnut	<i>H. rustica tytleri</i> .	
	{ Under parts not chestnut .. ..	.. ..	4
4	{ Larger, wing more than 4.75 inches ..	<i>H. r. rustica</i> .*	
	{ Smaller, wing less than 4.75 inches ..	<i>H. rustica gutturalis</i> .*	
	{ Under parts chestnut, finely streaked with black	<i>H. badia</i> .	
5	{ Under parts white, coarsely streaked with black	<i>H. daurica nipalensis</i> .	

303. *Hirundo javanica* Sparrm.

Hirundo javanica, Sparrm, Mus. Carls. iv, 1789, pl. 100 (Java).
A., p. 43 (Mergui); B., p. 10 (Junk Sylon); F., p. 50 (Langkawi); J., p. 166 (Koh Muk, Trang); Hume, Stray Feathers, ix, 1880, p. 120 (Kasoom).

Hypurolepis javanica, C. ii, p. 308 (Mergui); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 23 (Inner Gulf of Siam).

Common everywhere in open country and on the coast: a resident breeding bird. Williamson has a male taken at Koh Lak on the 29th December 1921.

Hirundo rustica rustica Linn.

Hirundo rustica, Linn, Syst. Nat. i, 1766, p. 343 (Sweden vide Hartert, Vog. Pal. Faun. i, 1910, p. 800).

Hirundo rustica rustica, Oberholser, Bulletin 98, U. S. N. M., 1917, p. 30 (Wintering southwards to the southern Malay Peninsula),

We have never seen an undoubted local example of this western race of the common swallow. It differs from the next in larger size, wing 120–130 mm.

310. *Hirundo rustica gutturalis* Scop.

Hirundo gutturalis, Scopoli, Del. Flor. et Faun. Insubr., pt. 2, 1786, p. 93 (Philippine Ids); A., p. 41 (Tavoy to Malewoon); E., p. 95 (Patani).

* When the tail of this species is not fully developed the pale undersurface will distinguish it from *H. javanica*, in which the lower breast and belly are dull brown.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Hirundo rustica, C. ii, p. 302 (Tenasserim).

♀. Tapli, Pakchan, Peninsular Siam, 11 March 1919 (No. 4540).

"Iris dark; bill and feet black".

Total length 139; wing 112; tail 60; tarsus 12.5; bill from gape 13 mm.

Common everywhere in winter. It is quoted by Gyldenstolpe (Ibis, 1920, p. 578) as breeding in the Inner Gulf of Siam, under a misapprehension; Williamson's eggs were stated by him to be those of *H. javanica*.

Hirundo rustica tytleri Jerdon.

Hirundo tytleri, Jerdon, Birds of India, iii, 1864, p. 870 (Dacca, East Bengal); A., p. 41 (Tavoy).

As this race occurs in South Tenasserim in winter, it is almost certain to visit the north of the Peninsula. Mr. C. J. Aagaard obtained an example at Bangkok in May 1922.

311. *Hirundo badia* (Cass.).

Cecropis badia, Cassin, Proc. Philad. Acad., 1853, p. 371.

Hirundo badia, D., p. 66 (Patani); E., p. 95 (Patani); F., p. 50 (Malay Peninsula); H., p. 98 (Bandon); J., p. 166 (Terutau and Langkawi Ids.); L. p. 103 (Ghirbi).

Feb. Three specimens from Ronpibun, Nakon Sri Tamarat, in *March* 1922. Always associated with limestone hills.

Hirundo daurica nipalensis Hodgs.

Hirundo nipalensis, Hodgson, Journ. Asiat. Soc. Bengal, v, 1836, p. 780 (Nepal); A., p. 44 (Pakchan to Malewoon).

There is no reason why this bird should not occur in the area.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

MUSCICAPIDAE.

FLYCATCHERS.

1	{ With black and white only in the plumage	2
	{ With yellow or green in the plumage	6
	{ With blue in the plumage	9
	{ Colours various; but always a bright one present	21
2	{ Colours fuscous, where not white	30
	{ Largest, tail greatly exceeding wing normally	3
	{ Medium, tail slightly exceeding wing	4
	{ Smallest, tail equal to, or shorter than wing	<i>Muscicapula melanoleuca westermanni</i> , ♂
3	{ Bill decidedly larger, black stripes on feathers fine	<i>Terpsiphone paradisi</i>
	{ Bill decidedly smaller, black stripes coarse	<i>T. p. incei</i> , ♂
4	{ Forehead white	<i>Rhipidura aureola burmanica</i> .
	{ Forehead black	5
5	{ Abdomen black	<i>R. albicollis</i> .
	{ Abdomen white	<i>R. j. javanica</i> .
6	{ With a distinctly margined yellow rump-patch	<i>Zanthytopia narcissina</i>
	{ With no distinct yellow rump-patch	<i>zanthytopia</i> .
7	{ A white superciliary streak	<i>Abornis s. superciliaris</i>
	{ No white superciliary streak	8
8	{ Head chestnut, differing from back	<i>Cryptolopha youngi</i> .
	{ Head grey, differing from back	<i>Culicicapa ceylonensis</i>
	{ Head like back	<i>Gerygone modiglianii pectoralis</i> .
9	{ Colour uniform blue	10
	{ Colour not uniform blue	12
10	{ Dull slaty blue, wing over 3.5 inches	<i>Drymophila velata caesia</i> , ♀
	{ Bright blue, wing 3.5 inches or less	11
11	{ Larger, wing more than 3.1 inches	<i>Stoporala t. thalassina</i> .
	{ Smaller, wing less than 3.1 inches	<i>S. thalassina thalassoides</i> .
12	{ Foreneck maroon	<i>Drymophila velata caesia</i> , ♂
	{ Foreneck blue	13
	{ Foreneck orange tawny	17
13	{ Wing and tail chestnut	<i>D. p. pyroptera</i>
	{ Wing and tail not chestnut	14
14	{ Nape and gorget black	<i>Hypothymis azurea styani</i> , ♂
	{ Nape and gorget not black	15
15	{ Back earthy brown	<i>H. a. styani</i> , ♀
	{ Back blue	16
16	{ Abdomen distinctly white	<i>Cyanoptila cyanomelana</i>
	{ Abdomen greyish white	<i>cumatilis</i> , ♂
17	{ Abdomen largely pure white	<i>Cyornis unicolor infuscata</i> , ♂
	{ Abdomen not largely pure white	18
18	{ Forehead shining blue	<i>C. sumatrensis</i> , ♂
	{ Forehead not shining blue	<i>C. sumatrensis</i> , ♀
19	{ Foreneck and breast paler orange	<i>C. magnirostris</i> , ♂
	{ Foreneck and breast darker orange	20
20	{ Larger, wing 3 inches or more	<i>C. anak</i> , ♂
	{ Smaller, wing about 2.75 inches	<i>C. coerulifrons</i> , ♀

21	{ Tail exceeding wing in length	22
	{ Tail not exceeding wing	23
	{ Head and throat shining black	<i>Terpsiphone paradisi incci.</i>
22	{ Head only shining black	<i>T. p. affinis.</i>
	{ Head dull black	<i>T. a. atrocaudata.</i>
23	{ A clearly margined white foreneck	<i>Anthipes solitaria submoniliger</i>
	{ No clearly margined foreneck	24
24	{ Base of tail white	<i>Erythromyias dumetoria muelleri.</i>
	{ Base of tail not white	25
25	{ With a white wing-bar	<i>Poliomyias mugimaki.</i>
	{ With no white wing-bar	26
26	{ Tail and wings uniform clear chestnut	<i>Drymophila p. pyrrhoptera</i> , ♀
	{ Tail and wings not chestnut	27
27	{ Bill broad and flattened	<i>Hemichelidon ferruginea.</i>
	{ Bill not broad and flattened	28
	{ Smaller, wing about 2.75 inches; rufous of foreneck and breast darker	<i>Cyornis coerulifrons</i> , ♀
28	{ Larger, wing about 3 inches; rufous of foreneck and breast paler	29
29	{ Pale area of throat broad	<i>C. magnirostris</i> , ♀
	{ Pale area of throat narrow	<i>C. anak</i> , ♀
30	{ Grey above	<i>Muscicapula melanoleuca</i>
	{ Not grey above	<i>westernmanni</i> , ♀
	{ Base of tail white	<i>Siphia parva albicilla.</i>
31	{ Base of tail not white	32
32	{ Bill broad and flattened	33
	{ Bill not broad and flattened	34
33	{ Breast dark like back	<i>Hemichelidon sibirica.</i>
	{ Breast pale, only washed with fuscous	<i>Alseonax latirostris.</i>
34	{ A pectoral band, more or less sharply contrasting with throat	35
	{ Breast like, or not sharply contrasting with, throat	36
35	{ Breast fulvescent	<i>Rhinomyias o. olivacea.</i>
	{ Breast earthy grey	<i>R. umbratilis infuscata.</i>
	{ First primary about 1/3 length of second; breast brownish	<i>Cyanoptila cyanomelana</i>
36	{ First primary about 1/2 second; breast greyish	<i>cumatilis</i> , ♀
	{ First primary more than 1/2 second; breast drabby	<i>Cyornis unicolor infuscata</i> , ♀
		<i>Muscitrea g. grisola.</i>

312. *Hemichelidon sibirica* (Gm.), subsp.?*Muscicapa sibirica*, Gmelin, Syst. Nat. i, 1788, p. 936 (Lake Baikal).*Hemichelidon fuliginosa*, F., p. 51 (Trang).*Hemichelidon sibiricus*, A., pp. 226, 510 (Nwalabo to Malewoun)?*Hemichelidon sibirica fuliginosa*, L., p. 103 (Junk Seylon).

♂ imm. Victoria Point, South Tenasserim, 24 February 1919 (No. 4189).

2♂, ♀ imm. Tasan, Chumporn, Peninsular Siam, 17-26 March 1919 (Nos. 4644, 4872, 4723).

♂ ad. Hat Sanuk, near Koh Lak, S. W. Siam, 17 April 1919 (No. 5368).

"Iris dark; bill black, gape yellow; feet black."

Total length ♂, 124, 122, 128, 138; ♀, 123; wing ♂, 71, 75, 76, 83, ♀, 73; tail ♂, 56, 53, 55, 60; ♀, 48; tarsus ♂, 11.5, 11.5, 14, 13.5; ♀, 12.5; bill from gape ♂, 13, 14, 17, 15; ♀, 14 mm.

An example was also obtained on Khao Ram, Nakawn Sri Tamarat, Peninsular Siam in March 1922.

It has hitherto been our practice, by reason of the distributions given for *H. sibirica* and *H. fuliginosa* in the "Handlist of Birds", Vol. iii, p. 204, to record all examples of the Sooty Flycatcher collected in the Malay Peninsula and adjacent islets under *Hemiclidom sibirica fuliginosa* Hodgson. But we have lately re-examined our series of thirty specimens and find, with the exception of the two apparently immature birds listed above, and an apparently immature individual from Junk Seylon Island with a wing of 71 mm., that the wing lengths of the series range between 75 and 83.5 mm. Apart from the male from Victoria Point and another from Tasan, none of the series has the first primary longer than the wing coverts: in nearly all it is markedly shorter. According to Hartert (Vog. palaarkt. Fauna, p. 479) these birds should be the typical *H. s. sibirica*—*H. s. fuliginosa* being a smaller, darker bird with wings of 70-75 mm., and the first primary as long or longer than the wing coverts. The three presumably younger specimens are much darker beneath, with less white, than the others: they may possibly represent *H. s. fuliginosa*. Nearly all our specimens come from islets in the Straits of Malacca or the mountains of the Malay States and all were taken between November and April.

A. Ilume, & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

313. Hemichelidon ferruginea Hodgs.

Hemichelidon ferruginea, Hodgson, P. Z. S. 1845, p. 32 (Nepal) ;
J., p. 168 (Butang Islands) ; M., p. 213 (Tung Song).

Alseonax ferrugineus, A., pp. 227, 510 (Nwalabo, Bankasoon).

We have a specimen from Khao Luang, 2,000 ft., Nakawn
Sri Tamarat, Peninsular Siam, obtained in March 1922.

314. Alseonax latirostris (Raffles).

Muscicapa latirostris, Raffles, Trans. Linn. Soc. xiii, 1822, p. 312
(Sumatra).

Alseonax latirostris, A., pp. 227, 510 (Tavoy to Tenasserim Town) ;
B., p. 11 (Junk Seylon) ; F., p. 51 (Terutau and Langkawi Is-
lands ; Trang) ; J., p. 168 (Langkawi and Terutau) ; K., p. 189
(Inner Gulf of Siam) ; L., p. 104 (Ghirbi ; Pulau Panjang ; Junk
Seylon) ; M., p. 214 (Tung Song and Patiyu).

♂. Koh Pra Tung, Takuapa, Peninsular Siam, 18 February
1919 (No. 4092).

♀. Nam Chut, Pakchan Estuary, Peninsular Siam, 26 Feb-
ruary 1919 (No. 4241).

2 ♀. Mamoh, Pakchan Estuary, Peninsular Siam, 27, 28
February 1919 (Nos. 4290, 4324).

♂, 2 ♀. Tapli, Pakchan, Peninsular Siam, 5-8 March 1919
(Nos. 4438, 4496, 4526).

2 ♀, ♀ imm. Tasan, Chumporn, Peninsular Siam, 16-23 March
1919 (Nos. 4625, 4672, 4809). *a "red" bird, now in B. M. (Siam), 250*

2 ♀. Koh Lak, S. W. Siam, 8, 9 April 1919 (Nos. 5189, 5149).

♂. Hat Sanuk, near Koh Lak, S. W. Siam, 17 April 1919
(No. 5367.)

"Iris dark ; bill black, basal half of lower mandible pale
yellow ; feet black".

Total length ♂, 123, 123, 132 ; ♀, 131, 125, 123, 126, 137, 125,
126, 131, 123, 131 ; wing ♂, 70, 69, 72 ; ♀, 66, 68, 70, 70, 72, 67, 71,
68, 70, 69 ; tail ♂, 50, 50, 53 ; ♀, 50, 52, 53, 48, 47, 55, 53, 53, 52, 52 ;
tarsus ♂, 14, 13, 15 ; ♀, 14, 14, 14, 13, 14, 14, 13, 14, 14.5, 14 ; bill
from gape ♂, 15, 16, 14 ; ♀, 16, 16.5, 17, 14, 17, 14, 15, 16, 16.5, 18 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Common throughout the area, especially in the winter months.

A female (No. 4809) from Tasan agrees well with the description of *A. latirostris siamensis* Gyldenstolpe (Ornith. Monatsb. 1916, p. 27), described from two specimens from Bang Hue Pong, North Siam. We do not, however, consider our specimen to be other than an immature stage of the common species, and we think Gyldenstolpe's form requires further verification.

315. *Siphia parva albicilla* (Pall.).

Muscicapa albicilla, Pallas, Zoogr. Rosso-Asiat. i, 1911, p. 462, Aves, tab. I (Dauria).

Erythrostera albicilla, A., p. 233 (Tavoy to Tenasserim Town).

♀. Mamok, Pakchan, Peninsular Siam, 27 February 1919 (No. 4291).

♀. Tasan, Chumporn, Peninsular Siam, 15 March 1919 (No. 4590).

"Iris dark; bill black, paler at base; feet black".

Total length, 126, 120; wing, 68, 68; tail, 58, 57; tarsus, 18. 17.5; bill from gape,—, 15 mm.

These specimens constitute a new record for Peninsular Siam. The species is not known from any part of British Malaya.

316. *Cyornis sumatrensis* (Sharpe).

Siphia sumatrensis, Sharpe, Cat. Birds Brit. Mus. iv, 1879, p. 451 (Malacca; *vide* Hartert, Nov. Zool. ix, 1902, p. 550).

Cyornis sumatrensis, F., p. 15 (Trang; Terutau); H., p. 147 (Koh Samui; K. Peunan); J., p. 170 (Langkawi; Terutau); L., p. 76 (Koh Lak Paa).

Cyornis tickelli sumatrensis, M., p. 213 (Tung Song).

Cyornis diallaema, H., p. 98 (Bandon).

Cyornis rubeculoides chersonites, Oberholser, Proc. Biol. Soc. Washington, 33, 1920, p. 85 (Trang).

"Iris dark; bill black; feet purplish fleshy".

4♂, 2♀. Hat Sanuk, S. W. Siam, 12–19 April 1919 (Nos. 5253, 5365–6, 5404, 5296, 5394).

♂. Koh Lak, S. W. Siam, 2 April 1919 (No. 4958).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910–11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Total length ♂, 140, 140, 142, 136, 138; ♀, 138, 138; wing ♂, 68, 69, 67, 67, 67; ♀, 62, 66; tail ♂, 62, 61, 62, 58, 60; ♀, 58, 60; tarsus ♂, 18, 18, 18, 17, 18; ♀, 18, 18; bill from gape ♂, 16, 17.5, 18, 17.5, 17; ♀, 18, 17 mm.

The White-bellied *Cyornis* is the commonest of all the blue flycatchers in the Peninsula. We can find no geographical differences in a large series of examples ranging from the neighbourhood of Malacca to Central and East Siam, and therefore feel unable to recognise *C. chersonites*.

317. *Cyornis magnirostris* Blyth?

Cyornis magnirostris, Blyth, Journ. Asiat. Soc. Bengal, xviii, 1849, p. 814 (Darjeeling).

Cyornis magnirostris, A., p. 229 (Laynah to Victoria Point); F., p. 51 (Trang); L., p. 104 (partim: Junk Seylon)

Siphia magnirostris, C. i., p. 290 (Malewoon).

♂ subad. Tasan, Chumporn, Peninsular Siam, 14 March 1919 (No. 4580).

"Iris dark; bill black, pale at base; feet whitish".

Total length 148; wing 73; tail 59; tarsus 18.5; bill from gape 19 mm.

On account of its large bill we record this bird as above: it differs from an adult male of the species in having no bluish edges to the wing feathers and in having the frontal band far paler and therefore more pronounced: the rufous of the breast extends more narrowly up the throat and falls distinctly short of the mandible.

318. *Cyornis coerulifrons* Baker.

Cyornis magnirostris coerulifrons, Baker, Bull. Brit. Orn. Club, xxxix, 1918, p. 8 (Patiyu); M., p. 213 (Patiyu).

Cyornis di lilaema, F., p. 52 (Trang).

♂. Tapli, Pakchan, Peninsular Siam, 4 March 1919 (No. 4424).

"Iris dark; bill black; feet purplish".

Total length 147; wing 71; tail 68; tarsus 18; bill from gape 17 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part)

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Two other males from Khao Luang, 3000 ft., Nakawn Sr; Tamarat, Peninsular Siam, with the above, are all that have yet been recorded from Siam; but we have found the bird common at 2000-3000 feet in the mountains of Perak and Selangor.

Possibly a resident subspecies of the preceding bird.

319. *Cyornis anak* Rob. and Kloss.

Cyornis anak, Robinson and Kloss, Journ. Fed. Malay States Mus. x, 1922, p. 261 (Trang, Peninsular Siam).

Cyornis magnirostris, L., p. 104 (partim: Ghirbi).

Only met with in Peninsular Siam and, like the preceding, not common: we have, besides the type, a male from Khao Luang, 2000 ft., Nakawn Sri Tamarat, and two females from Ghirbi and Trang.

Cyornis unicolor infuscat Hartert.

Cyornis unicolor infuscat, Hartert (nec Blyth), Nov. Zool. 1902, p. 550 (Java).

Cyornis unicolor, Herbert, Journ. N. H. Soc. Siam, ii, 1916. p. 58 (Siam).

We believe the specimen recorded by Herbert to have come from some part of Peninsular Siam.

320. *Anthipes solitaria submoniliger* Hume.

Anthipes submoniliger, Hume, Stray Feathers, v, 1877, p. 105 (Central Tenasserim Hills); A., p. 510 (Nwalabo); H., p. 99 (Bandon).

Digenea submoniliger, C. i, p. 301 (Nwalabo)

Anthipes submoniliger malayana, M., p. 214 (Tung Song).

We place seven specimens from Khao Nong, Bandon, with the northern form as they are decidedly different from topotypes and many other examples of *malayana* Sharpe, of the Malay States, with which we have compared them.

We have compared four Tung Song birds with the six co-types of *submoniliger* from Muleyit and one from Nwalabo with which they agree perfectly, except that the black pectoral line is a little more marked. They differ only from the type of *malayana* in having the sides of the head less rufous and in being more olivaceous above.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gaidner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Thus *submoniliger* is the palest, *malayana* more richly coloured: and the true *solitaria* of Sumatra most saturate of all— notwithstanding contrary conclusions we have come to previously, based on smaller series.

321. *Muscitrea grisola* + *risola* (Blyth).

Tephrodornis grisola, Blyth, Journ. Asiat. Soc. Bengal xiii, 1843, p. 180 (Calcutta).

Muscitrea grisola, A., p. 206 (Kolan Id., Mergui Arch.); C. i, p. 257 (Tenasserim); F., p. 54 (Langkawi Ids.); H., p. 148 (Koh Samui); K., p. 191 (Koh Lak).

Muscitrea grisola grisola, I., p. 78 (Koh Lak); J., p. 169 (Langkawi and Butang Ids.); L., p. 104 (Pulau Panjang).

4 ♂, 2 ♀. Pulau Mohea, W. Coast, Peninsular Siam, 1-2 February 1919 (Nos. 3914-16, 3922-4).

♂. Pangnga River, Peninsular Siam, 11 February 1919 (No. 3948).

4 ♂, 5 ♀. Koh Lak, S. W. Siam, 1, 2 April 1919 (Nos. 4889-91, 4926, 4933-7).

♂. Hat Sanuk, near Koh Lak, S. W. Siam, 19 April 1919 (No. 5398).

"Iris chocolate or hazel, but generally dark; bill black; feet slate, greyish black, or lavender".

Total length ♂, 165, 165, 171, 170, —, —, 158, 160, 154, 163; ♀, 169, 172, 161, 157, 155, 152, 159; wing ♂, 89, 88, 89, 88, —, 84, 86, 83, 84, 87; ♀, 85, 87, 80, 82, 83, 86; tail ♂, 75, 73, 78, 76, —, 70, 72, 73, 68, 70; ♀, 74, 77, 70, 70, 67, 70, 70; tarsus ♂, 21.5, 22, 22, 21, —, 20, 20, 20.5, 20, 20; ♀, 21, 23, 19, 20, 21.5, 20, 19.5; bill from gape ♂, 21.5, 22, 20.5, 21, —, 19, 18.5, 18.5, 20, 17; ♀, 20, 20.5, 18, 18, 18, 19, 20 mm.

Much has been written on this little understood bird, the latest review being by Stresemann (Nov. Zool. xx, 1913, p. 355). The species was originally described by Blyth from a specimen shot in Calcutta, though recent collectors do not seem to have obtained it from east of the head of the Bay of Bengal. Later Blyth redescribed

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919, (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919, (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920, (third part).

it from Ramri Id., Aracan, as *M. cinerea* (Journ. Asiat. Soc. Bengal xvi, 1847, p. 122). Northern birds seem rather larger than those from the Southern Malay Peninsula and the Indo-Malayan Islands, and if considered distinct these last will have to bear the name *M. philomela* Cab. (Arch. f. Naturg. ii, 1847, p. 322: type from Java, whence we have a series). The Pulau Mohea birds are the largest of any and seem rather darker coloured above, the primaries being more tinged with rufescent than in the series from Koh Lak.

So far as our experience goes, never found at any distance from the mangrove belt.

322. *Erythromyias dumetoria muelleri* Sharpe.

Erythromyias muelleri, Sharpe, Cat. Birds Brit. Mus. iv, 1879, p. 200 (Sumatra); H., p. 98 (Khao Nong, Bandon).

2♂. Tasan, Chumporn, Peninsular Siam, 17-24 March 1919 (Nos. 4650, 4835).

"Iris dark; bill black; feet whitish fleshy".

Total length 113, 110; wing 56, 56; tail 43, 42; tarsus 16, 17; bill from gape 16, 16 mm.

323. *Poliomyias mugimaki* (Temm.).

Muscicapa mugimaki, Temminck, Pl. Col. No. 577, fig. 2 (Japan).

Poliomyias mugimaki, J., p. 168 (Langkawi; Terutau).

Poliomyias luteola, (Pall.) et Auctt.

We have a female from Khao Luang, 5800 ft., Nakawn Sri Tamarat, Peninsular Siam, collected on 30th March 1922.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhot, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

324. *Muscicapula melanoleuca westermanni* Sharpe.

Muscicapula westermanni, Sharpe, P. Z. S. 1888, p. 270 (Perak).

A male was obtained on Khao Luang, 5,600 ft., Nakorn Sri Tamarat, Peninsular Siam, on 16th March 1922 by Mr. W. J. F. Williamson's collector.

325. *Gerygone modigliani pectoralis* Davison.

Gerygone pectoralis, Davison, Ibis, 1892, p. 99 (Pahang Coast).

Gerygone griseus, Gyldenstolpe, Ornith. Monatsb., 1916, p. 27 (Koh Lak); I., p. 78, Pl. 2, fig. 2 (Koh Lak); Robinson and Kloss, Ibis, 1918, p. 591.

Gerygone modigliani pectoralis, L., p. 104 (Pulau Panjang; Puket).

7♂ ad., 5♀ ad., ♂ imm., ♀ imm., 1 juv. Koh Lak, Rajburi, Peninsular Siam, 2-8 April 1919 (Nos. 4900-1, 4964-9, 4988-92, 5041-2, 5156).

"Iris dark; bill black; feet greenish black: younger birds with the bill pale or yellowish at the base; feet grey or dark slate".

Total length ♂, 103, 104, 98, 102, 98, 101, 103; ♀, 98, 103, 100, 98, 103; wing ♂, 51, 51, 48, 51, 49, 50, 53; ♀, 49, 48, 49, 47, 48; tail ♂, 38, 38, 37, 38, 37, 39, 40; ♀, 38, 38, 37, 38, 37; tarsus ♂, 16, 16.5, 16.5, 17, 16, 16.5, 15.5; ♀, 16, 15, 16, 15, 15; bill from gape ♂, 12.5, 12.5, 12, 12.5, 12.5, 12.5, 12; ♀, 12, 12, 12, 12, 13 mm.

The acquisition of this considerable series from the type locality of *Gerygone griseus* confirms our remarks on this "species", and its identity with *Gerygone pectoralis* from Kuala Pahang (Ibis, 1918). The whole series, however, as well as the type of *G. pectoralis*, and the bird from Pulau Panjang, have darker lores than the birds from the south of the West Coast, of which we now have eight specimens. In this they resemble the typical *G. modigliani* from Sumatra which, however, appears to be a bird with a slightly smaller bill, judging from our single specimen from Sungei Penoh, Korinchi, and with an even more markedly incomplete pectoral band. As regards the colour of the underparts, the tint of yellow, which is deeper in our single Sumatran bird, does not appear to be important.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Moulting birds in the present series show that the fresh plumage is deeper in colour, as might be expected. If these birds are sorted by the amount of white in the lores, those from Sumatra (*G. m. modigliani* Salvad.), Borneo (*G. m. salvadori* Buttkofer), and the East Coast of the Peninsula (*G. m. pectoralis* Davison) fall into one section, while those from West Java (*G. m. jacobsoni* Van Oort), Engano Id. (*G. m. muscicapa* Oberholser) and from the coast of Perak and Selangor, fall into another,

The conclusion is not an unexpected one, and should adequate series of all the reputed forms confirm it, the first group would have to be called *G. m. modiglianii* Salvad., and the second *G. m. jacobsoni* Van Oort, but in the absence of adequate series from all the localities we leave our Siamese material under the name which undoubtedly applies.

Gerygone simplex (Cab.), from Luzon, and *Gerygone rhizophora* Mearns, from Mindanao and Sulu, also require comparison; but judging from description would appear to come nearer *Gerygone flavicola* Cab., from Celebes.

326. *Xanthopygia narcissina xanthopygia* (Hay).

Muscicapa xanthopygia, Hay, Madras Journ. Lit. Sci. xiii. pt. 2, 1845, p. 162 (Malacca).

Xanthopygia xanthopygia xanthopygia, M., p. 215 (Tung Song).

♂. Kandhulu, Chaiya, Peninsular Siam, 21 September 1919 (E. Seimund).

♂. Koh Lak, S. W. Siam, 3 April 1919 (No. 5000).

♂. Hat Sanuk, near Koh Lak, S. W. Siam, 19 April 1919 (No. 5406).

"Iris dark; bill black; basal half of lower mandible slate; feet slate".

Total length, —, 132, 133; wing, —, 68, 70; tail, —, 52, 52; tarsus, —, 18 (app.), 16; bill from gape, —, 15, 14.5 mm.

Probably only a bird of passage in Peninsular Siam, as it is in British Malaya.

A. Hume & Davison, *Stray Feather*, vi, 1878.
B. Müller, *Die Ornithologie der Insel Salanga*, 1882.
C. Oates, *Birds Brit. Burmah*, Vols. i & ii, 1883.
D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.
F. Robinson and Kloss, *Ibis*, 1910-11.
G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.
H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

327. *Cyanoptila cyanomelana cumatilis* Thayer and Bangs.

Cyanoptila cumatilis, Thayer and Bangs, Bull. Mus. Comp. Zool. Harvard, lvi, 1909, p. 141 (Hupeh, China).

Cyanoptila cyanomelana, F., p. 53 (Terutau).

All the specimens we have seen from the Malay Peninsula conform to Thayer and Bangs' diagnosis: we are doubtful, however, whether it is other than the non-breeding plumage. Very similar birds have had the name *cyanothorax* applied to them by Sharpe.

328. *Hypothymis azurea styani* (Hartlaub).

Siphia styani, Hartl., Abh. Nat. Ver. Bremen, xvi, pt. 2, 1898, p. 248 (Hainan).

Hypothymis azurea, A., pp. 225, 509 (Nwalabo and Bankasoon); B., p. 11 (Junk Seylon and Peninsular Siam); C. i. p. 265 (Tenasserim); E., p. 94 (Patani); F., p. 53 (Trang); G., p. 149 (Ratburi or Petchaburi); H., pp. 99, 148 (Bandon; Koh Samui; Koh Pennan); L., p. 104 (Ghirbi; Junk Seylon, etc.); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 433 (Malewoon).

Hypothymis azurea prophata, I., p. 79 (Koh Lak); J., p. 170 (Langkawi; Terutau; Telibon).

Hypothymis azurea styani, K., p. 191; M., p. 215 (Patiyu and Tung Song).

♂ imm., ♀, 1 sex inc. Koh Rah, Takuopa, Peninsular Siam, 15-16 February 1919 (Nos. 4036-7, 4046).

♂ imm. Koh Yam Yai, Renong, Peninsular Siam, 18 February 1919 (No. 4118).

♀. Renong River, Peninsular Siam, 21 February 1919 (No. 4145).

♂, ♀. Victoria Point, South Tenasserim, 24 February 1919 (Nos. 4175-6).

♂. Mamoh, Pakchan, Peninsular Siam, 27 February 1919 (No. 4283).

3 ♂. Tapli, Renong, Peninsular Siam, 1-4 March 1919 (Nos. 4332, 4396, 4420).

♂, ♀. Tasan, Chumporn, Peninsular Siam, 19-22 March 1919 (Nos. 4699, 4786).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, This, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,

iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

♀. Koh Lak, S. W. Siam, 9 April 1919 (No. 5203).

3 ♂, ♀ imm., ♀. Hat Sanuk, S. W. Siam (Nos. 5282, 5333, 5359, 5390-1).

"Iris dark; bill blue; feet greyish blue".

Total length ♂ ♂ ad., 168, 161, 163, 161, 173, 160, 162, 161, 158; ♀, 153, 162, 158, 156, 153, 160; wing ♂, 73, 71, 73, 70, 70, 71, 70, 68, 71; ♀, 67, 68, 67, 68, 70, 70; tail ♂, 85, 78, 80, 76, 78, 77, 80, 77, 79; ♀, 73, 76, 73, 73, 73, 79; tarsus ♂, 18, 17, 17, 16, 18, 16, 18, 17, 17; ♀, 17, 17, 16, 17.5, 16, 20; bill from gape ♂, 18, 17, 17, 18, 19, 17, 19.5, 19, 19; ♀, 19, 20, 20, 19, 17, 19 mm.

All the specimens listed here can safely be referred to the Indo-Chinese race of the Blue Flycatcher: but specimens from Patani and other parts of the south show gradation towards the Malaysian form, *H. a. prophata* Oberholser (type locality, Kerimun Id., near Singapore), in which the white of the abdomen is reduced in area and less pure in colour. These intermediate Patani birds might equally well be called *H. a. prophata*.

329. *Rhipidura albicollis* (Vieill.).

Platyrrhynchus albicollis, Vieill., Nouv. Dict. d'Hist. Nat. xxvii, 1818, p. 13 (Bengal).

We have specimens from Khao Luang, 4,300 ft., Peninsular Siam, collected in March 1922, which are perhaps scarcely so grey as the typical bird, thus showing some approach to *atrata* Salvad., of Sumatra.

330. *Rhipidura aureola burmanica* (Hume).

Leucocerca burmanica, Hume, Stray Feathers, ix, 1880, p. 175, footnote (Thoungyeen Valley).

Rhipidura albifrontata burmanica, I., p. 80 (Koh Lak).

Gyldenstolpe's record from Koh Lak is the only one for the area.

331. *Rhipidura javanica javanica* (Sparrm.).

Muscicapa javanica, Sparrman, Mus. Carls. iii, 1788, pl. 75 (Java).

Leucocerca javanica, A., p. 226 (Tavoy; Mergui).

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| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905. |
| B. Müller, Die Ornith. der Insel Salanga, 1882. | F. Robinson and Kloss, <i>Ibis</i> , 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

Rhipidura javanica, C. i, p. 267 (Tavoy southwards); E., p. 92 (Patani); G., p. 149 (Ratburi & Petchaburi); I., p. 80 (Koh Lak); K., p. 192 (Koh Lak); L., p. 104 (Junk Seylon).

4 ♂, 5 ♀. Koh Lak, S. W. Siam, 1-9 April 1919 (Nos. 4893, 4938-9, 4997, 5098-9, 5129, 5205, 5213).

"Iris dark; bill and feet black".

Total length ♂, 292, 186, 183, 195; ♀, 174, 180, 195, 172, 188; wing ♂, 78, 78, 73, 81; ♀, 73, 73, 78, 72, 75; tail ♂, 105, 100, 94 (w), 100; ♀, 90, 98, 103, 95, 95; tarsus ♂, 18, 21.5, 20, 21; ♀, 20, 18.5, 21, 18, 20; bill from gape ♂, 18, 19, 18.5, 17; ♀, 18, 18, 18, 18, 18 mm.

332. *Terpsiphone paradisi affinis* (Hay).

Tchitrea affinis, Hay, Blyth, Journ. Asiat. Soc. Bengal, xv, 1846, p. 292 (Malacca).

Muscipeta affinis, A., pp. 223, 509 (Nwalabo to Malewoon); B., p. 11 (Junk Seylon); C. i, p. 262 (Tenasserim); E., p. 93 (Patani); F., p. 53 (Malay Peninsula); G., p. 149 (Ratburi & Petchaburi); H., pp. 99, 148 (Bandon & Koh Samui).

Terpsiphone paradisi affinis, J., p. 170 (Telibon & Lontar Ids.); L., p. 105 (Ghirbi; Pulau Panjang; Junk Seylon); M., p. 215 (Tung Song & Klong Wang Hip, Klong Bang Lai).

♀. imm. Koh Rah, Takuopa, Peninsular Siam, 15 February 1919 (No. 4035).

♀. De Lisle Id., Renong, Peninsular Siam, 19 February 1919 (No. 4125).

2 ♂, ♀. Tapli, Pakchan, Peninsular Siam, 2-7 March 1919 (Nos. 4343, 4373, 4485).

4 ♂, ♀. Tasan, Chumporn, Peninsular Siam, 20-24 March 1919 (Nos. 4706, 4729, 4730, 4750, 4804).

"Iris green or grey (males), brown (females); eye wattle and bill smalt blue; feet blue or purplish grey".

Total length ♂, 419, 293, 395, 448, 359, 375; ♀, 213, 213, 212; wing ♂, 98, 96, 95, 94, 97, 96; ♀, 88, 91, 87; tail ♂, 313, 185, 270, 335, 248, 268; ♀, 103, 106, 105; tarsus ♂, 16.5, 17, 17, 16, 16.5, 17; ♀, 17, 15, 16; bill from gape ♂, 28, 28, 28, 31, 28.5, 27; ♀, 26, 28, 25 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Terpsiphone atrocaudata atrocaudata (Eyton).

Muscipeta atrocaudata, Eyton, Proc. Zool. Soc. 1839, p. 102 (Malay Peninsula).

Muscipeta princeps, Temm., Pl. Col. 1835, pl. 584 (praeocc.), (Japan and Korea).

Terpsiphone princeps, Auctt.

We have obtained a few examples in the Malay States between the months of October and April: no doubt this bird will eventually be met with as a winter visitor in more northern parts of the Peninsula.

333. Terpsiphone paradisi incii (Gould).

Muscipeta incii, Gould, Birds of Asia, ii, 1852, pl. 19 (Shanghai).

Terpsiphone incii, E., p. 93 (Patani); Williamson, Journ. N. H. Soc. Siam, i, 1915, p. 208 (Bangkok).

♂. Hat Sanuk, S. W. Siam, April 1919 (No. 5261).

"Iris dark; eye wattle deep smalt; bill smalt; feet bluish purple".

Total length 375; wing 92; tail 263; tarsus 15; bill from gape 25 mm.

We have males in black and white plumage, which we refer to this species, from Trang (Dec. and Feb.), Langkawi Id. (Feb.) and Terutau Id. (March). The individuals of a fairly large series from the Malay States were all collected between September and April, as were specimens from Patani. Williamson's Bangkok birds, above cited, were obtained, one in September, the other in July or September, almost certainly the latter, as he has since procured eight more in September. All his birds are in the chestnut phase of plumage.

334. Drymophila velata caesia (Less.).

Monarcha caesia, Lesson, Rev. Zool. 1839, p. 167 (Sumatra).

Philentoma velatum, A., pp. 224, 509 (Tavoy to Bankasoon); C. i, p. 263 (Tenasserim); E., p. 92 (Pattani); H., p. 120 (Bandon); M., p. 215 (Tung Song).

Philentoma velata caesia, Kloss, Journ. Fed. Malay States Mus. x, 1921, p. 217 (Malay Peninsula).

♂, ♀. Tapli, Renong, Peninsular Siam, 1-9 March 1919 (Nos. 4330, 4516).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salangau, 1882.

C. Oates, Birds Brit. Borneo, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibid., 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂. Tasan, Chumporn, Peninsular Siam, 22 March 1919 (No. 4774).

"Iris red; bill and feet black".

Total length ♂, 190, 193; ♀, 205; wing ♂, 96, 96; ♀, 94; tail ♂, 88, 93; ♀, 87; tarsus ♂, 19, 19; ♀, 19. 5; bill from gape ♂, 24, 22; ♀ 22 mm.

335. *Dymophila pyrrhoptera pyrrhoptera* (Temm.).

Muscicapa pyrrhoptera, Temminck, Pl. Col. 1823, No. 596, fig. 2 (Borneo and Sumatra. Type locality Borneo).

Philentoma pyrrhopterum, A., pp. 223, 509 (Nwalabo to Bankasoon); C. i, p. 264 (South Tenasserim); E., p. 92 (Patani); F., p. 53 (Trang); H., p. 100 (Bandon); M., p. 215.

5 ♂, 4 ♀. Tasan, Chumporn, Peninsular Siam, 14-24 March 1919 (Nos. 4578-9, 4639, 4651, 4681, 4767, 4779, 4816, 4847).

"Iris red; bill black; feet slate".

Total length ♂, 173, 172, 168, 172; ♀, 170, 168, 175, 170; wing ♂, 84, 82, 78, 83; ♀, 76, 77, 80, 78; tail ♂, 77, 77, 72, 76; ♀, 78, 70, 75, 78; tarsus ♂, 18, 17, 16, 16. 5; ♀, 16, 17, 16, 17; bill from gape ♂, 20, 23, 23, 23; ♀, 21, 21, 21, 20 mm.

336. *Rhinomyias umbratilis infuscata* (Blyth).

Muscicapa infuscata, Blyth, Ibis, 1870, p. 165 (Sumatra).

Cyornis albo-olivacea, Hume, Stray Feathers, v, 1877, p. 488 (Malacca).

Rhinomyias pectoralis, Williamson, Journ. N. H. Soc. Siam, iii, 1918, p. 21 (Patani).

The example obtained by Williamson seems to be the only Siamese record at present. We have this bird from Kedah Peak.

Continental birds apparently agree with those of Sumatra, both differing from the typical Bornean form in being slightly larger and darker.

337. *Rhinomyias olivacea* (Hume).

Cyornis olivacea, Hume, Stray Feathers, v, 1877, p. 338 (extreme south of Tenasserim); A., p. 229 (Tenasserim Town to Bankasoon).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Siphia olivacea, C. i, p. 292 (Tenasserim Town to Bankasoon).

Anthipes olivacea, H., p. 99 (Bandon); M., p. 214 (Tung Song and Mapri').

♂, ♀. Koh Rah, Takuopa, W. Coast, Peninsular Siam, 15-16 February 1919 (Nos. 4038, 4041).

"Iris reddish; bill black; feet lavender".

Total length ♂, 153; ♀, 138; wing ♂, 76; ♀, 71; tail ♂, 64; ♀, 62; tarsus ♂, 20; ♀, 17.5; bill from gape ♂, 19.5; ♀, 17 mm.

Several examples were secured in March 1922 on Khao Ram and Khao Luang, 1,200-2,000 ft., Nakorn Sri Tamarat, Peninsular Siam. Birds from the Malay Peninsula, Sumatra and West Java are alike.

338. *Culicicapa ceylonensis* (Swains.).

Platyrrhynchus ceylonensis, Swainson, Zool. iii. ser. i, 1820-1, pl. 13 (Ceylon).

Culicicapa ceylonensis, A., p. 226 (Choungthanoung; Bankasoon); C. i, p. 274 (Tenasserim); E., p. 91 (Patani); H., p. 100 (Bandon); M., p. 215 (Tung Song).

♂. Tung Pran, Takuatung, W. Coast, Peninsular Siam, 13 February 1919 (No. 3978).

4 ♂. Tasan, Chumporn, Peninsular Siam, 15-20 March 1919 (Nos. 4605-6, 4618, 4717-8).

"Iris dark brown; upper mandible dark, lower pale pinkish, yellow at base; tarsus brownish yellow, yellow posteriorly.

Total length, —, 122, 116, 118, 121, 117; wing, —, 58, 58, 59, 61, 58; tail, —, 57, 57, 50, 54, 49; tarsus, —, 13, 13, 13, 13, 12.5; bill from gape, —, 14, 13, 13, 14, 14 mm.

339. *Cryptolopha youngi* Robinson.

Cryptolopha youngi, Robinson, Journ. Fed. Malay States Mus. v, 1914, p. 100 (Khao Nawng, Bandon, 3,500 ft.).

Known from the type only until two further specimens were obtained on Khao Luang, 3,000-5,800 feet, Nakorn Sri Tamarat, on 30, 31 March 1922.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.
D. Bonhôte, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam i, 1915.
H. Robinson, Journ. F. M. S. Museum, s, v, 1915.

340. *Abrornis superciliaris superciliaris* Tick.

Abrornis superciliaris, Tickell, Journ. Asiat. Soc. Bengal, xxvii, 1859, p. 414 (Tenasserim); A., p. 339 (Pabyin near Mergui).

Cryptolopha superciliaris, C. i, p. 273 (Tenasserim).

Abrornis schwaneri, H., p. 101 (Bandon).

Abrornis superciliaris schwaneri, M., p. 202 (Tung Song; Patiyu).

♂, ♀. Tapli, Pakchan, Peninsular Siam, 8 March 1919 (Nos. 4509-10).

3 ♂, 4 ♀. Tasan, Chumporn, Peninsular Siam, 13-21 March 1919 (Nos. 4551, 4569, 4638, 4653, 4696, 4740, 4789).

Total length ♂, 107, 98, 108, 135; ♀, 102, 95, 104, 104, 104; wing ♂, 49, 45, 51, 46; ♀, 46, 45, 47, 46, 48; tail ♂, 43, 38, 44, 58; ♀, 40, 38, 40, 38, 40; tarsus ♂, 18, 17.5, 17.5, 20; ♀, 17, 15, 16, 16, 17.5; bill from gape ♂, 14, —, 14, 15; ♀, 13, 12, 14, 12, 14 mm.

In dealing with this species Baker states that the type locality is the Himalayas, and that it is confined to these mountains as far east as the Mishmi Hills (Journ. Bombay N. H. Soc. xxvii, 1921, p. 488; M., p. 202). This is incorrect: the type of *A. superciliaris* came from the "mountainous interior of Tenasserim", and the Himalayan bird is *Abrornis flaviventris* Jerd. (Birds of India, ii, 1863, p. 203: Darjeeling).

A. s. superciliaris ranges southwards as far as Bandon in Peninsular Siam; birds from Perlis and Perak are intermediate between it and *A. s. schwaneri* of Borneo, which is also found in Selangor and Negri Sembilan, Malay States, and which differs only in rather larger size; wings 51-56 mm. against 45-51 in the typical race: there are no colour distinctions.

Five specimens from Borneo have wings 51, 52, 53, 53, 56 mm. Seven specimens from Negri Sembilan and Selangor have wings 50, 52, 52, 52, 54, 55 mm. Four specimens from Perak and Perlis have wings 50, 51, 52, 52 mm. Five specimens from Bandon have wings 45, 49, 49, 50, 50 mm., while the present examples from the Isthmus of Kra range between 45-51 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Summarising the above, *A. s. superciliaris* has wings between 45–51 mm: *A. s. schwaneri* wings between 50–56 mm.

The Sumatran bird is *A. s. schwaneri*: the Javanese race, *A. s. voedermanni* (Buttik.), of which we have a large series, is very distinct.

341. *Stoporala thalassina thalassina* (Swains.).

Muscicapa thalassina, Swainson, Nat. Hist. Flycatchers, 1838, p. 252 (India).

Stoporala melanops, A., p. 227 (Mergui to Bankasoon); C. i, p. 285 (Tenasserim); L., p. 83 (Koh Lak); M., p. 214 (Patiyu).

Birds from Nong Khae and Koh Lak, S. W. Siam, though in slightly immature plumage, have wings 86, 88, 89 mm. There seems to be no difference in colour between the Indian and Malayan races, but the former has the wing over 80 mm., whereas in the southern bird it is less.

342. *Stoporala thalassina thalassoides* (Cab.).

Glaucomyias thalassoides, Cabanis, Mus. Hein, i, 1850-1, p. 53 (Sumatra).

Stoporala thalassoides, F., p. 54 (Trang).

Stoporala melanops, Hume, Stray Feathers, ix, 1880, p. 114 (Ghirbi).

1 ♂ ad. Tasan, Chumporn, Peninsular Siam, 23 March 1919 (No. 4821).

"Iris dark; bill and feet black".

Total length 150; wing, 72; tail, 65; tarsus, 14.5; bill from gape, 16 mm.

This bird, on account of its small size, seems undoubtedly to belong to the Malayan race.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. Insel Salanga, 1882.
C. Oates, Birds Brit. Barmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

CAMPEPHAGIDAE.

MINIVETS AND CUCKOO-SHRIKES.

1	{ Size large, wing more than 6 inches ..	<i>Coracina javanensis larvivorus.</i>	
	{ Size small, wing less than 5.5 inches ..	.. .. .	2
2	{ With bright colours in plumage ..	.. .. .	3
	{ With no bright colours ..	.. .. .	8
3	{ Throat dark, sharply contrasting with breast ..	.. .. .	6
	{ Throat uniform with breast ..	.. .. .	5
4	{ Throat dark grey ..	<i>Pericrocotus peregrinus vividus</i> , ♂	
	{ Throat glossy black ..	.. .. .	4
5	{ Under wing-coverts red like the breast ..	<i>P. speciosus flammifer</i> , ♂	
	{ Under wing-coverts yellow, contrasting with breast ..	<i>P. igneus.</i>	
	{ Rump scarlet ..	.. .. .	7
	{ Rump bright yellow, under side similar ..	<i>P. speciosus flammifer</i> , ♀	
6	{ Rump wax-yellow, under side yellowish white ..	<i>P. roseus</i> , ♀	
	{ Rump rosy-red ..	<i>P. roseus</i> , ♂	
7	{ Under side bright yellow ..	<i>P. igneus</i> , ♀	
	{ Under side albescent ..	<i>P. peregrinus vividus</i> , ♀	
	{ Under side whitish ..	.. .. .	3
8	{ Under side uniform grey ..	.. .. .	19
	{ Under side barred black and white ..	.. .. .	12
9	{ Mantle glossy black, a narrow white forehead ..	<i>Lalage n. nigra</i> , ♂	
	{ Mantle grey or brownish grey ..	.. .. .	10
10	{ A broad white forehead ..	<i>Pericrocotus c. cinereus</i> , ♂	
	{ No broad white forehead ..	.. .. .	11
11	{ Mantle and rump pure grey, tail blacker ..	<i>P. c. cinereus</i> , ♀ & juv.	
	{ Mantle and rump brownish, tail browner ..	<i>P. cantonensis.</i>	
12	{ Under tail-coverts dark grey ..	<i>Lalage fimbriata culminata</i> , ♂	
	{ Under tail-coverts pale or whitish ..	.. .. .	15
13	{ Wing-coverts, secondaries and tail largely grey ..	<i>L. f. polioptera</i> , ♂	
	{ Wing-coverts, secondaries and tail black, scarcely grey ..	.. .. .	14
14	{ Size larger, wing more than 4.75 inches ..	<i>L. melaschistus intermedia</i>	
	{ Size smaller, wing less than 4.1 inches ..	<i>L. fimbriata neglecta</i> , ♂	
15	{ Upper surface brownish ..	<i>L. n. nigra</i> , ♀ & juv.	
	{ Upper surface grey ..	.. .. .	16
16	{ Larger, wing more than 4.1 inches ..	<i>L. fimbriata polioptera</i> , ♀ & juv.	
	{ Smaller, wing less than 4.1 inches ..	{ <i>L. f. culminata</i> , ♀ & juv. <i>L. f. neglecta</i> , ♀ & juv.	

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

343. *Pericrocotus speciosus flammifer* Hume.

Pericrocotus flammifer, Hume, Stray Feathers, iii, p. 321 (note), (Pakchan, S. Tenasserim); id, op. cit. v., 1877, p. 195 (Banka-son); A., pp. 211, 508 (Nwalabo to Pakchan); C. i, p. 237 (Tenasserim; Junk Seylon); F, p. 54 (Trang); H., p. 101 (Bandon).

Pericrocotus elegans, A., p. 211 (Tavoy to Malewoon)?; B., p. 12 (Junk Seylon); C. i, p. 236 (Tavoy to Malewoon)?.

Pericrocotus speciosus fraterculus, Hartert, Nov. Zool. ix, 1902, p. 555 (Gunong Tahan and Gunong Ijau, Malay States); M., p. 206 (S. W. and Peninsular Siam).

Pericrocotus xanthogaster flammifer, Robinson, Journ. Fed. Malay States Mus. vi, 1915, pp. 31, 35.

? *Pericrocotus fraterculus*, G., p. 149 (Ratburi and Petchaburi).

2 ♂. Tapli, Pakchan, Peninsular Siam, 3-7 March 1919 (Nos. 4383, 4465).

♀. Hat Sanuk, near Koh Lak, S. W. Siam, 13 April 1919 (No. 5275).

"Iris dark; bill and feet back".

Total length ♂, 193, 177; ♀, 198; wing ♂, 91, 91; ♀, 92; tail ♂, 83, 83; ♀, 88; tarsus ♂, 16, 17; ♀, 17.5; bill from gape ♂, 21, 23; ♀, 22.5 mm.

Of the two males, which are topotypes, one has a spot of red on the outer web of the third primary.

The proper name for this Minivet has been the subject of some controversy. The original race extending from North India to Assam, north of the Bhramapootra (*fide* Baker) has a wing of 102-117 and a tail of 101-115 mm. (*fide* Hartert, *l. c.* s¹.) This is *P. speciosus speciosus* (Lath., Darjeeling).

The race from Hainan has a wing of 93-98, and a tail of 95-105 mm: *P. s. fraterculus* Swinh. It possibly extends to the mainland opposite Hainan.

P. s. fokiensis Baker², said to be like "*fraterculus*" but with a duller and greener female, is based on Fokien birds.

1. *Fide* Hume, S. F. v, p. 193; wing 99-109 mm.

2. Bull. Brit. Orn. Club, XL, 1920, p. 116.

A. Hume & Davison, Stray Fether, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901. Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

All these have the median rectrices of males entirely, or almost entirely, black and, with few exceptions, only the two first primaries without any red on the outer webs. (Hartert finds fault with Oates in the description of this feature, but it is obvious the latter meant to refer to the outer web of the primaries only).

In birds from south of about Lat. 12° in the Malay Peninsula, and in Sumatra and Borneo, it is quite the exception to find males with any red on the outer web of the third primary, while the median rectrices have the outer web entirely red. The first form of this type to be described was *P. s. xanthogaster* Raffles, from Sumatra (syn. *ardens* Bp., also from Sumatra). This race is found in Sumatra, Borneo and the southern fourth of the Malay Peninsula, and has a wing rarely, if ever, exceeding 87 mm. The fourth primary is sometimes unspotted on its outer web.

P. s. flammifer Hume (*l. c. s*), takes its place in the mountains of the Malay States and Peninsular Siam, and at lower levels in S. W. Siam and S. Tenasserim. It completely intergrades with *xanthogaster*, differing only in slightly larger average size; and in having the yellow of the head of the female brighter and more extensive and the rump and upper tail coverts also yellower. South of the Pakchan (type locality) the wing does not appear to exceed 92 mm. According to Hume (*l. c. s.*, p. 508) and Oates (Fauna Brit. Ind. Birds, i, 1889, p. 493) this race is found as far north as Tavoy.

Birds from South Annam and Cochin China, with wings 88-95 mm. (incorrectly recorded by us as *P. s. fraterculus*, Ibis, 1919, p. 452) only differ from *flammifer* in being a trifle larger and in being unstable as regards the third primary; sometimes the outer web is spotted with red, sometimes not; and occasionally it is spotted in one wing and plain in the other. The characters given by Gyldenstolpe for the birds from North Siam, listed under *P. fraterculus* (Kungl. Sv. Vet. Handl. Band 56, No. 2, 1916, p. 2) are not

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920 (part). (third part)

clearly recorded, and in reply to enquiries he has informed us that they are not the same as the Hainan bird: in a series of twenty adult males the outer webs of the central rectrices are not entirely black. In one specimen both webs of the inner rectrices are red, except for small spots at the base and tip of the inner web; some have the inner webs black and the outer red except at the base, and yet others have the outer web black except for a red spot at the tip. In semi-adult males the central rectrices are wholly black. Obviously the North Siamese bird is unstable and changing from the more typical *speciosus* forms into the subspecies *fraterculus*.

The majority of the adult males have only the two outermost primaries wholly black on the outer webs, but in one example the outer web of the third primary is entirely black. Wing lengths range between 85 and 98 mm.

In the area between the habitats of the foregoing races and birds, viz., in Assam south of the Brahmapootra, in the whole of Burma and in South Annam and Cochin China, occurs a bird like *flammifer* in having the outer webs of the median rectrices red, but becoming rather larger and with the outer webs of only the first two primaries unspotted (*P. elegans* Hume, S. F. v, 1877, p. 194; Oates, Birds of Burma, i, 1883, p. 236; *P. fraterculus*, Oates, F. B. I., Birds, i, 1889, p. 481); wings, *fide* Hume, up to 97 mm. It is evident that in the south it intergrades and inosculates with *flammifer*. Though recognised by so sound and careful an ornithologist as Hume, this race remains without a name unless *Pericrocotus yvetteae* Bangs, from N. E. Burma and W. Yunnan (Bull. American Mus. Nat. Hist. xLiv, 1921, p. 583) can be applied. This last is said to be like *xanthogaster*, but larger, wing, ♂ 94, ♀ 87; and except that (as in some males of *xanthogaster*) four primaries are unspotted on the outer web in the male, which may be unstable in this respect, it agrees with the *elegans* of Hume (not *elegans* of McClelland which is a synonym of *speciosus*—*fide* Oates: otherwise McClelland's name would apply).

A. Hume & Davison, Stray Feathers, vi, 1878.
 B. Müller, Die Ornith. der Insel Salanga, 1882.
 C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
 D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
 F. Robinson and Kloss, *Ibis*, 1910-11.
 G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
 H. Robinson, Journ. F. M. S. Museums, v, 1915.

[The type male of *P. yvettae* has the red on the secondaries continuous from base to near tip on outer webs. This feature occurs in one male from Negri Sembilan, S. Malay Peninsula, and almost occurs in another from Kuching, Sarawak. Thus in Malaysia this character is abnormal].

344. *Pericrocotus igneus igneus* Blyth.

Pericrocotus igneus, Blyth, Journ. Asiat. Soc. Bengal, xv, 1846, p. 309 (Malacca); A., p. 211 (Pakechan); B., p. 13 (Malay Peninsula); C. i, p. 239; H., p. 101 (Bandon); Robinson, Journ. Fed. Malay States Mus. vi, 1915, p. 32.

The pair from Bandon quoted above, and a male from Bangnara, Patani (W. J. F. Williamson coll.), are the only specimens definitely from Siam, though Mueller's probably came from the mainland near Junk Seylon.

345. *Pericrocotus roseus* (Vieill.).

Muscicapa rosea, Vieill. Nouv. Dict. d'Hist. Nat. 1818, xxi, p. 486 (Bengal).

Pericrocotus roseus, A., p. 212 (Mergui); C. i, p. 247; L., p. 105 (Junk Seylon).

Pericrocotus intensior, Hume, Stray Feathers, v, 1877, p. 185 (East of Bay of Bengal).

The single specimen obtained by our collectors at Puket (Junk Seylon) in December 1917 is the only Siamese record for this minivet, except an immature male procured by Mr. W. J. F. Williamson at Bangkok in January 1916.

346. *Pericrocotus cinereus cinereus* Lafr.

Pericrocotus cinereus, Lafr, Rev. Zool. viii, 1845, p. 94 (Luzon, Philippine Islands); A., p. 83 (Mergui to Pakechan); B., p. 13 (Junk Seylon); C. i, p. 241; F., p. 55 (Trang: part.); L., p. 74 (Koh Lak); L., p. 105 (Ghirbi).

♂. Tung Pran, Takuatung, Peninsular Siam, 13 February 1919 (No. 3967).

"Iris, bill and feet black".

Total length 198; wing 91; tail 192; tarsus 15; bill from gape 18.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

M. i. Baker, Journ. N. H. Soc. Siam, iv, 1920. (second part).

M. i. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

Very common over the whole area throughout the winter months.

347. *Pericrocotus cantonensis* Swinh.

Pericrocotus cantonensis, Swinh., Ibis, 1861, p. 42 (Canton, South China); Oates, Stray Feathers, x, 1881, p. 200 (Malewoon); C. i, p. 243; L., p. 105 (Ghirbi and Junk Seylon).

Pericrocotus immodestus, Hume, Stray Feathers, v, 1877, p. 177 (Tenasserim).

Pericrocotus cinereus (part:), F., p. 55 (Trang).

♂, 3 ♀. Tasan, Chumporn, Peninsular Siam, 18-22 March 1919 (Nos. 4671, 4701, 4746, 4781).

"Iris dark; bill and feet black".

Total length ♂, 188; ♀, 188, 197, 200; wing ♂, 87; ♀, 87, 90, 90; tail ♂, 92; ♀, 94, 103, —; tarsus ♂, 16; ♀, 15.5, 16, 14; bill from gape ♂, 19; ♀, 17, 18, 20 mm.

This species is really very distinct from *P. cinereus*, being recognizable at all ages by the clay-brown, not pure grey, rump: by the yellowish tinge of the quills and, in the adult male, by lacking the deep glossy black of the occiput, clearly distinct from the grey of the upper parts, which is characteristic of the adult of *P. cinereus*.

P. cantonensis apparently breeds in South China and winters in Tenasserim, Pegu and Siam, while *P. cinereus* both breeds further north and has a more extensive winter range, obeying a rule which is almost universally true, that the further north a migratory bird breeds, the further south it is likely to extend in winter. We do not see why the two forms should be regarded as subspecies: there is no evidence or likelihood of intergradation, and they can hardly be considered as representative geographical forms, as the winter range of *P. cantonensis* is enveloped by that of *P. cinereus*.

348. *Pericrocotus peregrinus vividus* Baker.

Pericrocotus peregrinus vividus, Baker, Bull. Brit. Orn. Club, XL, 1920, p. 114 (Attaran River, Tenasserim).

Pericrocotus peregrinus, A., p. 212 (S. Tenasserim); C. i, p. 245; Salvad. Ann. Mus. Civ. Gen. (2) vii, 1889, p. 433 (Malewoon).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. I. & II, 1883.
D. Bonhôte, P. Z. S. 1901, Vol. I.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam I, 1915.
H. Robinson, Journ. F. M. S. Museum, s, v, 1915.

♂. Koh Rah, Takuapa Inlet, Peninsular Siam, 16 February 1919 (No. 4047).

2 ♂, 2 ♀. Koh Pra Tung, Takuapa Inlet, Peninsular Siam, 17-18 February 1919 (Nos. 4082-4, 4099).

♂, ♀. Renong River, Peninsular Siam, 21 February 1919 (Nos. 4139, 4140).

♀. Koh Lak, S. W. Siam, 9 April 1919 (No. 5214).

"Iris dark; bill and feet black".

Total length ♂, 156, 153, 154, 155; ♀, 148, 151, 161, 135; wing ♂, 72, 73, 70, 72; ♀, 71, 70, 72, 67; tail ♂, 77, 75, 70, 72; ♀, 73, 78, 80, 70 (imp.); tarsus ♂, 18, 15, 15, 16; ♀, 14.5, 15, 16, 14.5; bill from gape ♂, 16, 15, 15, 17; ♀, 15, 15, 16, 15 mm.

This Minivet was very abundant on the shores of Takuapa Inlet, flying in small flocks. Its occurrence is the first record for Siam south of Bangkok. It has not yet been found in any part of British Malaya, though it is known from Java, Borneo and Sumatra.

The above series is larger, especially in the bill, than a small series from Western Java, *P. p. saturatus* Baker. We think that the balance of probability is in favour of Java being the true *terra typica*, but Baker has recently designated Umballa, India.

349. *Coracina javensis larvivorus* (Hartert).

Graucalus macei larvivorus, Hartert, Nov. Zool. xvii, 1910, p. 227 (Hainan).

Graucalus macei, A., p. 210 (Tavoy to Pakchan); C. i, p. 229 (Tenasserim); I., p. 70 (Koh Lak).

Graucalus macei siamensis *, Baker, Bull. Brit. Orn. Club. xxxviii, 1918, p. 69 (Siam).

2 ♂. Koh Lak, S. W. Siam, 6 April 1919 (Nos. 5121-2).

"Iris red; bill reddish; feet black".

Total length 283, 296; wing 165, 170; tail 130, 128; tarsus 29, 29; bill from gape 37, 38 mm.

* For remarks on the validity of this name, see Journ. N. H. Soc. Siam, iii, 1919, p. 447.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).

Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Since we wrote on these birds of Indo-China,* we have obtained a series of *Coracina javensis javensis* (Horsf.) from the lowlands of Java.

In colour the Indo-Chinese birds we have seen are absolutely indistinguishable from them, and it is only on a slight difference in size that we can base any distinctness: wings of 7 Javanese specimens 152–163 mm.; of 18 continental Indo-Chinese birds (8 Southern Siam, 2 Cochin China, 8 South Annam) 158–172 mm.

We may therefore call birds from Eastern Indo-China *C. j. larvivorus* (Hartert) wings of type series 166–173. *C. m. siamensis* (Baker) based on Siamese birds, will not stand: the describer himself, apparently ignorant of Hartert's work, regards Hainan and Siamese birds as the same: also, as he says, it is inadvisable to create further subspecies on the one unsupported character of size—where, by his own showing, size is so variable.

As regards the species name, *javensis* of Horsfield has priority over *macei* of Lesson.

Coracina javensis larutensis (Sharpe), from the mountains of the Malay States (wings of 8 examples, 150–162 mm.), is a good subspecies, differing from the typical race in being of a slightly deeper shade, in having the grey of the underparts extending further posteriorly, thus decreasing the whitish area of the lower abdomen; and in having much less grey on the outer webs of the wing feathers: altogether a darker bird.

350. *Lalage melaschistus intermedia* (Hume).

Volucivora intermedia, Hume, Stray Feathers, v, 1887, p. 205 (Tenasserim); A., p. 210 (Mergui).

Campophaga saturata, *C. melanoptera* and *C. innominata*, C. i, pp. 230, 1, 3 (Mergui; Tavoy), vide *C. melanoptera*, synonymy, Oates, Fauna Brit. Ind. Birds, i, 1889, p. 492.

Volucivora koratensis, K., p. 193 (E. Siam).

* *Graucalus macei macei*, Kloss, Ibis, 1918, p. 192 (E. Siam); *Graucalus macei siamensis*, Robinson and Kloss, Ibis, 1919, p. 450 (S. Annam).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901. Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Campophaga melanoschistus intermedia, M., p. 207 (E. Siam).

♂. Tapli, Renong, Peninsular Siam, 2 March 1919 (No. 4355).

♀. Koh Lak, S. W. Siam, 5 April 1919 (No. 5089).

♀. Hat Sanuk, S. W. Siam, 13 April 1919 (No. 5268).

"Iris brown or crimson; bill and feet black".

Total length ♂, 243; ♀, 237, 242; wing ♂, 126; ♀, 118, 123; tail ♂, 117; ♀, 118, 123; tarsus ♂, 23; ♀, 21, 21; bill from gape ♂, 24; ♀, 24, 23.5 mm.

All the specimens we have seen, seven in number, agree with the type of *V. koratensis* in having white or buffy white under tail-coverts. Gyldenstolpe (I., p. 71), under *V. melaschistus intermedia*, records a bird from Koh Lak "having the under tail-coverts pure slaty grey and exactly of the same colour as the rest of the under surface". Grey under tail-coverts are apparently characteristic of typical *intermedia* and it was because of this that *koratensis* was proposed for birds with white under tail-coverts.

Mr. W. J. F. Williamson has obtained an example from Nailhut, near Langsuen, Peninsular Siam, with a wing of 120 mm. and pale greyish buff under tail-coverts. It is possible that a bird from Junk Seylon recorded by Mueller (B., p. 13) as *Volvocivora avensis* (wing 115 mm.) is of the present species, in which case it is the most southerly on record.

351. *Lalage fimbriata polioptera* (Sharpe).

Campophaga polioptera, Sharpe, Cat. Birds Brit. Mus. iv, 1879, pp. 69, 471, pl. II (Cochin China).

Volvocivora melanoptera avensis, I., p. 71 (Koh Lak).

Volvocivora polioptera, K., p. 194 (Koh Lak); Kloss, Journ. N. H. S. Siam, iii, 1919, p. 447 (Koh Lak; N. Siam; Cochin China); id., op. cit. iv, 1920, p. 52 (Nong Khae, S. W. Siam).

Volvocivora neglecta, Baker, Ibis, 1918, p. 597.

2 ♂, 3 ♀. Koh Lak, S. W. Siam, 4-9 April 1919 (Nos. 5017, 5100, 5182, 5207, 5239).

"Iris dark or reddish; bill and feet black".

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

Total length ♂, 212, 208; ♀, 206, 208, 213; wing ♂, 108, 112; ♀, 107, 110, 108; tail ♂, 99, 98; ♀, 103, 97, 99; tarsus ♂, 21, 18; ♀, 21, 20, 20.5; bill from gape ♂, 22, 20; ♀, 22, 22, 21.5 mm.

These are the same as the birds described at length by Kloss in Ibis, 1918, p. 194, as are a series of five specimens from Nong Khae, S. W. Siam, lent us by Mr. Williamson, the wings of which range between 108 and 115 mm. in length. All have been compared with the types of *Campophaga polioptera* in the Natural History Museum in London, with which they agree perfectly. They are quite distinct from the smaller and darker race, *L. f. neglecta* Hume, which they meet in S. W. Siam and South Tenasserim.

352. *Lalage fimbriata neglecta* (Hume).

Volucrivora neglecta, Hume, Stray Feathers, v, 1877, p. 203 (extreme south of Tenasserim); A., p. 210 (Mergui to Malewoon); B., p. 14 (Junk Seylon).

Campophaga neglecta, C. i, p. 232 (Malewoon); F., p. 54 (Trang), H., pp. 101, 148 (Bandon and Koh Samui); M., p. 207 (Tung Song).

Lalage fimbriata neglecta, L., p. 105 (Junk Seylon and Pulau Panjang); Kloss, Journ. Fed. Malay States Mus. x, 1922, p. 220 (S. Tenasserim to Patani).

Lalage neglecta, Kloss, Journ. Nat. Hist. Soc. Siam, iii, 1919, p. 448 (South Tenasserim and Peninsular Siam).

♀. Namchut, Pakchan, Peninsular Siam, 26 February 1919 (No. 4260).

♂. Tasan, Chumporn, Peninsular Siam, March 1919 (No. 4684).

"Iris brown; bill and feet black".

Total length ♂, 196; ♀, 202; wing ♂, 100; ♀, 100; tail ♂, 90; ♀, 92; tarsus ♂, 20; ♀, 21; bill from gape ♂, 22; ♀, 22 mm.

This form inhabits Tenasserim, south of Mergui, and Peninsular Siam: birds from the Malay State of Perlis may also be placed in it.

353. *Lalage fimbriata culminata* (Hay).

Ceblephrys culminatus, Hay, Madras Journ. Lit. and Sci. xiii, 1844, p. 162 (Malacca).

Lalage fimbriata culminata, Kloss, Journ. Fed. Malay States Mus. x, 1922, p. 220, note (Patani).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.
D. Bonhôte, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam i, 1915.
H. Robinson, Journ. F. M. S. Museum, v, 1915.

A male from Bangnara, Patani, Peninsular Siam, obtained by Mr. C. J. Aagaard on 21st July 1916, must undoubtedly belong to this race though it is actually darker, especially about the head, neck and undertail coverts than specimens from Selangor, much nearer the typical locality.

Wing of the above specimen (Coll. W. J. F. Williamson) 100; tail 85 mm.

There is a transition zone in the extreme south of Peninsular Siam and in the Malay States inhabited by birds which are intermediate, but on the whole nearest *neglecta*.

354. *Lalage nigra nigra* (Forst.).

Turdus niger, Forster, Ind. Zool. 1781, p. 41 (India).

Lalage terat, (Boie) and Auctt.

Campophaga terat, Williamson, Journ. N. H. S. Siam, ii, 1916, p. 60 (Singgora and Patani),

The birds recorded by Williamson appear to be the only examples yet met with in Siam.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first part). Baker, Journ. N. H. Soc. Siam, iii, 1919.

(second part).

M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920.

(third part).

PYCNONOTIDAE.

1	{	General colours intense; with no neutral greys or browns in the plumage	2
		Bright colours, if any, localised; with neutral browns or greys in the plumage	19
2	{	Plumage entirely dull blue or bright blue and black	3
		Plumage largely green or yellow	4
		Plumage entirely black and white	<i>Microtarsus melanoleucus</i>
3	{	Under tail-coverts not reaching middle of tail	<i>Irena puella puella</i>
		Under tail-coverts extending beyond middle of tail	<i>I. p. cyanea</i>
4	{	Head crested	<i>Otocompsa flaviventris minor</i>
		Head not crested	5
5	{	Under tail-coverts not uniform with the under surface	6
		Under tail-coverts uniform with under surface	7
6	{	Top of head glossy black, throat white	<i>Rubigula squamata webberi</i>
		Head all round blue grey	<i>Pycnonotus c. cyaniventris</i>
7	{	Head all round glossy black, tail feathers tipped bright yellow	<i>Brachypodius atriceps</i> , subsp.
		Head all round not glossy black, tail feathers not tipped with yellow	8
8	{	With no emerald green in the plumage	9
		With more or less emerald green in the plumage	11
9	{	General colour beneath sage green, eye-ring conspicuous	<i>Aegithina viridissima</i>
		General colour beneath bright yellow, eye-ring not conspicuous	10
10	{	Smaller; wing less than 2.5 inches	<i>Aegithina viridis tiphia</i>
		Larger; wing more than 2.5 inches	<i>Aethorhynchus l. lafresnayei</i>
11	{	Belly with more or less orange	<i>Chloropsis hardwicki malayana</i>
		Belly green	12
12	{	Forehead with more or less orange	<i>C. aurifrons inornata</i>
		Forehead with no orange	13
13	{	Throat black	14
		Throat green, no ocular ring	18
		Throat yellow, a yellow ocular ring	<i>C. viridis zosterops</i> , ♀
14	{	Wing and tail largely blue, sides of head more or less yellow	15
		Wing and tail green, sides of head with no yellow	16
15	{	Crown bright golden yellow	<i>C. i. icterocephala</i> , ♂
		Crown verditer green	<i>C. i. chlorocephala</i> , ♂
16	{	Wing more than 3.5 inches, a bright patch of colour at the angle	<i>C. v. zosterops</i> , ♂
		Wing less than 3.5 inches, no bright patch at the angle	17

A. Hume & Davison, *Stray Feathers*, vi, 1878.
 B. Müller, *Die Ornith. der Insel Salanga*, 1882.
 C. Oates, *Birds Brit. Burmah*, Vols. i & ii, 1883.
 D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.
 F. Robinson and Kloss, *Ibis*, 1910-11.
 G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.
 H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

17	{ Black throat-patch bordered by green	<i>C. c. cyanopogon</i> , ♂	
	{ Black throat-patch bordered by yellow	<i>C. c. septentrionalis</i> , ♂	
18	{ Webs of primaries blue	<i>C. icterocephala</i> , subsp. ♀	
	{ Webs of primaries green	<i>C. cyanopogon</i> , ♀	
19	{ Under tail-coverts red		20
	{ Under tail-coverts not red		21
20	{ A red patch below the eye	<i>Otocompsa jocosa peguensis</i>	
	{ No red beneath the eye	<i>Molpastes haemorrhous klossi</i>	
21	{ Crown shining ochraceous; wing more than 4.5 inches	<i>Trachycomus zeylanicus</i>	
	{ Crown not ochraceous; wing less than 4.5 inches		22
22	{ Under tail-coverts clear yellow		23
	{ Under tail-coverts not clear yellow		26
23	{ Wing 3 inches or less	<i>Tricholestes c. criniger</i>	
	{ Wing more than 3 inches		24
24	{ Chin and throat streaked with yellow	<i>Pycnonotus f. finlaysoni</i>	
	{ Chin blackish, throat white	<i>Molpastes aurigaster</i> , subsp.	
	{ Chin and throat white		25
25	{ Lores black, a white eyebrow, breast brownish white	<i>Pycnonotus goiaver analis</i>	
	{ Lores grey-white, no white eyebrow, breast yellow	<i>Alophoixus p. phaeocephalus</i>	
26	{ Rump mottled, feathers tipped white	<i>Euptilosus euptilosus</i>	
	{ Rump plain		27
27	{ Throat and breast streaked		28
	{ Throat and breast plain		29
28	{ Crown brown, streaked	<i>Ixos maccllellandi perakensis</i>	
	{ Crown green, plain	<i>I. malaccensis</i>	
29	{ Feathers of chin and throat lengthened and white in colour		30
	{ Feathers of chin and throat not lengthened nor distinct in colour		32
30	{ Upper parts ashy brown, under tail-coverts white	<i>I. c. cinereus</i>	
	{ Upper parts olivaceous, under tail-coverts fulvous		31
31	{ Crown markedly contrasting with mantle, abdomen distinctly yellow	<i>Criniger gularis tephrogenys</i>	
	{ Crown scarcely contrasting with mantle, abdomen buffy	<i>C. gutturalis ochraceous</i> , subsp.	
32	{ Ear-coverts with clear white shaft stripes		33
	{ Ear-coverts with no white shaft stripes		34
33	{ Tail and wings strongly tinged with olive-green, darker below	<i>Pycnonotus p. plumosus</i>	
	{ Tail and wings scarcely tinged with olive-green, paler below	<i>P. blanfordi robinsoni</i>	

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
 J. Robinson, Journ. F. M. S. Mus. vii, 1917.
 K. Kloss, Ibis, 1918.
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first part).
 Baker, Journ. N. H. Soc. Siam, iii, 1919. (second part).
 M. I. Baker, Journ. N. H. Soc. Siam, iv, 1920. (third part).

34	{ Feathers of crown rounded, lores uniform	..	..	..	..	35
	{ with forehead .. ..	..	..	..	..	..
	{ Feathers of crown pointed, lores paler	..	..	..	..	37
	{ than forehead .. ..	..	..	..	..	..
35	{ Eyelid brightly coloured, wing 2.75 to	..	..	..	..	..
	{ 3 inches .. ..	..	..	..	..	..
	{ Eyelid not brightly coloured, wing 2.95 to	..	..	..	..	36
	{ 3.55 inches .. ..	..	..	..	..	..
36	{ Iris whitish, wing 2.95 to 3 15 inches	..	..	..	..	..
	{ Iris reddish, wing 3.15 to 3.55 inches	..	..	..	..	..
37	{ Under tail-coverts less richly coloured, wing	..	..	..	..	..
	{ 3.35 to 3 55 inches .. ..	..	..	..	..	..
	{ Under tail-coverts more richly coloured,	..	..	..	..	..
	{ wing less than 3.35 inches .. ..	..	..	..	..	..

*P. c. erythroptalmus**P. s. simplex**P. b. brunneus**Iole o. olivacea**I. o. cinnamomeoventris*

355. *Aegithina viridissima* (Bp.).

Iora viridissima, Bp., Consp. Av., i, 1850, p. 397 (Sumatra, restricted); Hume, Stray Feathers, v., 1877, p. 427 (Mergui); A., p. 327 (Mergui).

Aegithina viridissima, C. i. p. 201 (Mergui); F., 55 (Trang); J., p. 171 (Terutau); K., p. 197 (Koh Lak); L., p. 106 (Junk Seylon); M., p. 192 (Patiyu); M. 2, p. 343 (Burma, Siam and Malay Peninsula).

♂. Tapli, Pakchan, Peninsular Siam, 3 March 1919 (No. 4376).

"Iris grey; bill and feet slate, culmen black".

Total length, 133; wing, 63; tail, 50; tarsus, 18; bill from gape, 18 mm.

We have carefully compared a considerable series from the Malay Peninsula with birds from Borneo and Sumatra: while the island birds are possibly slightly darker, the differences are not sufficient to warrant the recognition of a continental race.

356. *Aegithina tiphia tiphia* (Linn.).

Motacilla tiphia, Linn., Syst. Nat. i, 1766, p. 331 (Bengal).

Iora tiphia, Hume, Stray Feathers, v, 1877, p. 428; A., p. 327 (Tavoy to Bopyin); B., p. 15 (Junk Seylon).

Aegithina typhia, Salvad., Ann. Mus. Civ. Gen (2) vii, 1889, p. 437 (Malewoon).

Aegithina tiphia, C. i, p. 202 (Tenasserim); D., p. 91 (Patani); E., p. 90 (Patani); F., p. 55 (Trang); H., pp. 101, 148 (Bandon; Koh Samui; Koh Pennan); I., p. 63 (Koh Lak).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Barmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Aegithina tiphia tiphia, M., p. 191 (Bangkok ; Meklong ; Patiyu) ;
M. 2, p. 341 (Burma, Siam and North Malay Peninsula).

♂, ♀. Koh Pra Tung, Takuapa, P. Siam, 17-18 Feb. 1919
(Nos. 4088-9).

♂, ♀. Nam Chuk, Pakchan Estuary, P. Siam, 25-26 Feb. 1919
(Nos. 4207, 4259).

5 ♂, 2 ♀. Koh Lak, Ratburi, S. W. Siam, 1-3 April 1919
(Nos. 4879, 4887-8, 4930, 4959, 5001, 5002).

"Iris white ; bill slate, culmen black ; feet slaty, sometimes
tinged with green".

Total length ♂, 135, 142, 135, 142, 135, 137, 133 ; ♀, 132,
150, 137, 138 ; wing ♂, 63, 61, 63, 62, 62, 63, 62 ; ♀, 63, 63, 62, 61 ;
tail ♂, 50, 53, 52, 52, 48, 48, 50 ; ♀, 53, 60, 53, 50 ; tarsus ♂, 18, 20,
20, 19, 18.5, 19, 18.5 ; ♀, 19, 20, 18, 19 ; bill from gape ♂, 20, 17,
17.5, 18, 18, 18, 16, 17 ; ♀, 20, 20, 18, 18 mm.

As Sharpe observes (Cat. Birds B. M. vi, p. 5) black-backed
and black-naped birds occur ; but in Burma are rather the exception.
Our series bears out this statement.

357. *Aethorhynchus lafresnayei lafresnayei* (Hartl.).

Iora lafresnayei, Hartlaub, Rev. Zool. 1844, p. 401 (Malacca) ;
Hume, Stray Feathers, v, 1877, p. 423 (Mergui) ; A., p. 328
(Mergui ; Bankasoon) ; B., p. 15 (Junk Seylon).

Aethorhynchus lafresnayei, C. i, p. 204 (South Tenasserim) ; E.,
p. 89 (Patani) ; F., p. 55 (Trang) ; H., p. 101 (Bandon) ; I.,
p. 64 (near Koh Lak) ; L., p. 106 (Junk Seylon) ; M., p. 190
(Tung Song and Patiyu) ; M. 2, p. 338 (Tenasserim, Siam and
Malay Peninsula).

♂. Tung Pran, Takuapa, P. Siam, 13 Feb. 1919 (No. 3973).

♀. Renong River, P. Siam, 22 Feb. 1919 (No. 4155).

♀. Mamoh, Pakchan, P. Siam, 27 Feb. 1919 (No. 4299).

1 ♂, 2 ♀. Tapli, Pakchan, P. Siam, 2-4 March 1919 (Nos. 4344,
4419, 4522).

♂. Tasan, Chumporn, P. Siam, 24 March 1919 (No. 4849).

♂, ♀. Hat Sanuk, Ratburi, S. W. Siam, 12-19 April 1919
(Nos 5246, 5399).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

"Iris whitish or hazel grey to dark, generally whitish; bill and feet pale grey, culmen black".

Total length ♂, 157, 150, 167, 155; ♀, 160, 165, 164, 162, 169; wing ♂, 71, 70, 72, 68 (imp.); ♀, 72, 70, 73, 67, 70, tail ♂, 63, 58, 65, 60; ♀, 64, 68, 63, 59, 63; tarsus ♂, 21, 21, 22, 21; ♀, 20, 22, 21.5, 21.5, 22; bill from gape ♂, 25, 22.5, 26, 24; ♀, 26, 23, 26, 26, 24 mm.

None of this series shows more than a very little black on the head and back. The nominal Cambodian and Cochín-Chinese race, *Ae. zanthotis* Sharpe, is only very doubtfully distinguishable, but the material is small.

***Chloropsis hardwickii malayana* Rob. and Kloss.**

Chloropsis hardwickii malayana, Robinson and Kloss, Journ. Fed. Malay States Mus. xi, 1923, p. 55 (Perak).

Chloropsis hardwickii hardwickii, M. 2, p. 349 (partim: Tenasserim, W. Siam, Malay Peninsula).

This subspecies, which is known from the Malay States, will not improbably be obtained eventually from the mountains of the area now being dealt with, as Gyldenstolpe records a bird from North Siam ("probably an immature male") with a wing of 88 mm. (I., p. 64). This race is considerably smaller than the typical northern one from Nepal.

358. *Chloropsis aurifrons inornata* Kloss.

Chloropsis aurifrons inornatus, Kloss, Ibis, 1918, p. 198 (Lat Bua Kao, E. Siam); K., p. 198 (Koh Lak); M. 2, p. 349 (West and South Siam; Tenasserim).

Chloropsis aurifrons, I., p. 64 (partim: Koh Lak).

2 ♂ ad. Koh Lak, S. W. Siam, 2 April 1919 (Nos 4953-4).

♂ ad., ♀ imm. Hat Sanuk, S. W. Siam, 44 April 1919 (Nos. 5288, 5299).

Total length ♂ ad., 177, 193, 187; wing, 89, 91, 88; tail, 70, 72, 70; tarsus, 17, 19, 17; bill from gape, 22, 22, 20.

These specimens, as was to be expected, conform to the types.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornithologie der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

359. *Chloropsis viridis zosterops* Vig.

Chloropsis zosterops, Vigors, App. Mem. Life Raffles, 1830, p. 674 (Sumatra); C. i, p. 207 (S. Tenasserim); E., p. 89 (Patani); F., p. 55 (Trang); M., p. 193 (Tung Song).

Phyllornis javensis, A., pp. 324, 516 (Nwalabo to Bankasoon); B., p. 34 (Junk Seylon).

Chloropsis viridis zosterops, J., p. 171 (Telibun Island); M. 2, p. 351 (S. W. Siam; Tenasserim South of Ye).

♂. Tung Pran, Takuatung, P. Siam, 14 Feb. 1919 (No. 4003).

2 ♂, ♀. Koh Pra Tung, Takuapa, P. Siam, 17-18 Feb. 1919 (Nos. 4086, 4090-1).

1 ♀. Namchuk, Pakchan, P. Siam, 25 Feb. 1919 (No. 4217).

"Iris brown; bill black; feet greenish slate".

Total length ♂, 205, 198, 205; ♀, 203, 190; wing, ♂, 104, 98, 102; ♀, 98, 92; tail ♂, 90, 80, 87; ♀, 83, 83; tarsus ♂, 20.5, 18, 20; ♀, 20, 21; bill from gape ♂, 27, 27, 26; ♀, 25, 25 mm.

360. *Chloropsis icterocephala icterocephala* (Less.).

Phyllornis icterocephalus, Lesson, Rev. Zool., 1840, p. 164 (Palembang, Sumatra).

Chloropsis icterocephala, E., p. 89 (Bukit Besar, Patani).

This form is represented in the extreme south of Peninsular Siam by birds which show gradation towards *C. i. chlorocephala*. The female specimens recorded by us from Puket as belonging to this form are *C. i. chlorocephala* (Wald.).

361. *Chloropsis icterocephala chlorocephala* (Walden).

Phyllornis chlorocephalus, Walden, Ann. and Mag. Nat. Hist. (4) vii, 1871, p. 241 (Tonghoo; North Tenasserim); A., pp. 323, 516 (Tavoy to Malewoon); C. i, p. 208 (Tenasserim; Kussoom; Junk Seylon); F., p. 55 (Trang); H., p. 101 (Bandan).

Phyllornis icterocephalus, B., p. 34 (Junk Seylon).

Chloropsis chlorocephala, G., p. 148 (Ratburi and Petchaburi); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 437 (Malewoon).

Chloropsis icterocephala chlorocephala, J., p. 172 (Lontar I.); M. 2, p. 350 (the whole of Siam).

Chloropsis chlorocephala icterocephala (lapsus calami), L., p. 106 (Junk Seylon).

Chloropsis chlorocephala chlorocephala, M., p. 192 (Tung Song).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♂. Tung Pran, Takuatung, P. Siam, 13 Feb. 1919 (No. 3931).

♀. Pangnga River, P. Siam, 11 Feb. 1919 (No. 3749).

♂. Renong River, P. Siam, 22 Feb. 1919 (No. 4154).

♂, 2 ♀. Tapli, Pakchan, P. Siam, 1-7 Feb. 1919 (Nos. 4331, 4474-5).

♂, 4 ♀. Tasan, Chumporn, P. Siam, 13-26 March 1919 (Nos. 4543, 4616, 4732, 4794, 4868).

♂, ♀. Hat Sanuk, Koh Lak, Ratburi, S. W. Siam, 12 April (Nos. 5259-7).

"Iris brown; bill black, lower mandible slaty in females; feet greenish lead.

Total length ♂, 188, 183, 183, —, 187; ♀, —, 168, 170, 168, 178, 175, 167, 174; wing ♂, 86, 83, 85, —, 81; ♀, —, 81, 76, 78, 80, 77, 77, 73; tail ♂, 75, 74, 75, —, 74; ♀, —, 70, 68, 70, 69, 67, 65, 67; tarsus ♂, 17, 17, 18, —, 18; ♀, —, 17, 17, 18.5, 17, 18, 18, 16.5; bill from gape ♂, 22, 21, 21, —, 21.5; ♀, —, 22, 22, 20, 20, 22, 21, 20 mm.

The most southerly specimen of this race known to us is one from Perlis.

362. *Chloropsis cyanopogon cyanopogon* (Temm.).

Phyllornis cyanopogon, Temminck, Pl. Col. 1829, Pl. 512, fig. 1. (Palembang).

Chloropsis cyanopogon, E., p. 88 (Patani); M. 2, p. 353 (partim: S. Malay Peninsula).

Specimens before us from Bangnara, Patani, show that the typical race just enters Siam in that State: examples from Perlis and Kedah on the West Coast belong to the northern subspecies. Birds from North Perak are intermediate.

363. *Chloropsis cyanopogon septentrionalis* Rob. and Kloss.

Chloropsis cyanopogon septentrionalis, Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1918, p. 107 (Ghirbi. Also Trang, Perlis and Kedah).

Phyllornis cyanopogon, A., p. 325 (Bankasoon); B., p. 34 (Junk Seylon).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Chloropsis cyanopogon. F., p. 56 (Trang); M. 2, p. 352 (partim : S. W. Siam ; South Tenasserim).

♀. Tapli, Pakchan, P. Siam, 8 March 1919 (No. 4502),

♀. Tasan, Chumporn, P. Siam, 25 March 1919 (No. 4851).

"Iris dark or brown; bill grey, culmen black; feet greenish grey".

Total length, 162, 167; wing 72, 75; tail, 60, 67; tarsus 17, 19; bill from gape, 20, 19 mm.

This form differs from the typical bird in having the black throat of the male bordered posteriorly with yellow: a yellow-washed forehead generally distinguishes the female.

364. *Irena puella puella* (Latham).

Coracias puella, Lath., Ind. Orn. i, 1790, p. 171 (India : Travancore).

Irena puella, A., pp. 328, 516 (Tavoy to Bankasoon); B., p. 29 (Junk Seylon); C., i, p. 209 (Malewoon); F., p. 56 (Trang); H., pp. 102, 148 (Bandon and Koh Samui).

Irena puella puella, L., p. 107 (Ghirbi and Junk Seylon); M., p. 193 (Tung Song and Patiyu).

♂. Tung Pran, Takuatung, P. Siam, 12 Feb. 1919 (No. 3958).

♂ imm., 2 ♀. Koh Rak, Takuapa, P. Siam, 15-16 Feb. 1919 (Nos. 4026-7, 4072).

♂, ♀. Renong River, P. Siam, 22 Feb. 1919 (Nos. 4150-1).

♂, Mamoh, Pakchan, P. Siam, 28 Feb. 1919 (No. 4308).

♂, ♂ imm. Tapli, Pakchan, P. Siam, 2 March 1920 Nos. 4349, 4371).

2 ♀. Tasan, Chumporn. P. Siam, 14-26 March 1920 Nos. 4571, 4852).

"Iris red; bill and feet black".

Total length ♂, 250, 255, 243, 248; ♀, 253, 264, 263, 245, 260; wing ♂, 122, 126, 127, 121; ♀, 125, 127, 120, 120, 126; tail ♂, 103, 105, 104, 103; ♀, 98, 104, 107, 107; 107; tarsus ♂, 18, 18, 17, 19; ♀, 18, 17, 19, 18, 19; bill from gape ♂, 30, 30, 29.5, 30; ♀, 28, 30, 29.5, 25, 29 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

This race only differs from the southern form in its shorter under tail-coverts, which do not nearly reach the extremity of the tail feathers.

365. *Irena puella cyanea* (Begbie).

Muscicapa cyanea, Begbie, Malayan Peninsula, 1834, p. 517 (Malacca).

Irena malayensis, B., p. 30 (Malay Peninsula).

Irena cyanea, E., p. 88 (Patani); F. p. 56 (Langkawi and Terutau Is. and the Peninsula south of Trang).

Irena puella cyanea, J., p. 172 (Langkawi and Terutau).

Terutau forms about the northerly limit for this race which grades so gradually into *I. p. puella* that there is a zone in their distribution in which it is a matter of individual fancy as to which subspecies birds are assigned; on the whole there appears to be a slight tinge of violet in the backs of northern males, which is absent in southern birds.

In Journ. Washington Acad. Sci., vii, 1917, p. 358, Dr. Oberholser diagnoses "*Irenidae* fam. nov." with the genus *Irena*, his type for the latter being *Coracias puella* Latham; and then erects *Glauconympha* gen. nov. with the type *Muscicapa cyanea* Begbie. These genera are considered to be differentiated by differences in the in the lengths of tail and tail-coverts.

The type of *Irena*, however, is not *Irena puella* (Latham) but *Irena turcosa* Walden, as Sharpe correctly states in the "Catalogue of Birds," for *Irena puella* Horsfield, not *Coracias puella* Latham, is the Javanese bird known since 1870 as *Irena turcosa*, and it was the Javanese bird, "*Irena puella* mihi," on which Horsfield based his genus. With regard to a family, Oberholser's action has been anticipated for, even if not earlier, the family *Irenidae* was proposed by Stoliczka in Journ. Asiat. Soc. Bengal, xxxix, pt. ii, 1870, p. 318, where there appears:—Fam. IRENIDAE.

Irena puella Lath. (var. *cyanea* Begbie).

We need not follow the matter further: personally we can only admit *I. cyanea* as a subspecies of *I. puella*, and only one genus, *Irena*. Any family recognised must be:—

- | | |
|--|---|
| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905 |
| B. Müller, Die Ornith. der Insel Salanga, 1882. | F. Robinson and Kloss, Ibis, 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

Irenidae Stoliczka, 1870. Type genus *Irena* Horsfield. Genus *Irena* Horsfield, 1821, Genotype *Irena turcosa* Walden (*Irena puella* Horsf. nec. Latham).

Even if any ornithologist is prepared to follow Oberholser and recognise two genera, *Glaconympha* cannot be used, since Oberholser himself regards *turcosa* and *cyanea* as congeneric.

366. *Ixos cinereus cinereus* (Blyth).

Iole cinerea, Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 573 (Malacca).

Iole terricolor, Hume, Stray Feath., vii, 1878, pp. 141, 451 (Malacca): id. op. cit., viii, 1879, p. 62.

Hemixus cinereus, E., p. 88 (Patani); F., p. 56 (Trang); M., p. 194 (Tung Song).

Our series of 22 specimens from Kedah to near Malacca show the variations in tint typified by *H. cinerea* and *H. terricolor* from one and the same locality. We have, on former occasions, compared specimens from Trang and Patani with the southern birds and have been unable to discern any differences. Sumatran birds, which have been named *Trichophorus pulverulentus* (Bp. Consp. i, p. 262), do not appear to be separable either.

367. *Ixos malaccensis* (Blyth).

Hypsipetes malaccensis, Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 574 (Malacca); A., p. 298 (Tenasserim Town to Bankasoon).

Hemixus malaccensis, C. i, p. 177 (Mergui to Victoria Point); F., p. 56 (Trang); H., p. 102 (Bandon); J., p. 173 (Telibun Island),

Iole malaccensis, M. p. 196 (Tung Song); M. 2, p. 404 (Tenasserim, Siam and the Malay Peninsula).

2 ♂, ♀ imm. ? imm, Tasan, Chumporn, P. Siam, 14-24 March 1922 (Nos. 4574, 4683, 4726, 4823).

"Iris red or reddish; bill horn, culmen black; feet blackish or brownish".

Total length ♂, 224, 231; wing, 103, 102; tail, 100, 102; tarsus, 17.5, 17.5; bill from gape, 26.5, 26 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

368. *Ixos maclellandi peracensis* (Hartert and Butl.).

Iole tickelli peracensis, Hartert and Butler, Nov. Zool. vi, p. 506; 1898 (Gunong Ijau, Perak).

Iole peracensis, H., p. 102.

Only known from Peninsular Siam at present by a specimen from Khao Nawng, Bandon, 3000 ft., and another from Khao Luang, Nakon Sritamarat, 5500 ft., obtained on March 29th, 1922, which are identical with the topotypes.

369. *Iole olivacea olivacea* Blyth.

Iole olivacea, Blyth, Journ. Asiat. Soc. Bengal, xiii, 1844, p. 386 (Singapore); F., p. 56 (partim, Trang).

Iole olivacea olivacea, Robinson and Kloss, Ibis, 1918, p. 589 (Trang southwards).

Trang forms the meeting place of this and the succeeding race; both forms, which are readily distinguishable, occurring in the district.

370. *Iole olivacea cinnamomeoventris* Baker.

Iole olivacea cinnamomeoventris, Baker, Bull. Brit. Orn. Club. xxxviii, 1917, p. 16 (Bankasoon; Tenasserim); Robinson and Kloss, Ibis, 1918, p. 588 (Peninsular Siam to Tenasserim); M. 2, p. 407 (Tenasserim and Siam).

Iole viridescens, A., pp. 315, 515 (partim: Nwalabo to Malewoon); C. i. p. 177 (Tenasserim to Tongka); I., p. 67 (Koh Lak).

Iole olivacea, F., p. 56 (partim, Trang).

Iole virescens lonnbergi, M., p. 197 (Patiyu).

♂. Tung Pra, Takuatung, P. Siam, 13 Feb. 1919 (No. 3976).

3 ♂, 1 ♀. Koh Rah, Takuapa, P. Siam, 15-16 Feb. 1919 (Nos. 4025, 4033, 4073-4).

♂. Mamoh, Pakchan, P. Siam, 28 Feb. 1919 (No. 4312).

3 ♂. Tapli, Pakchan, P. Siam, 1-6 March 1919 (Nos. 4336-7, 4456).

2 ♀, 1 ♀ imm. Tasan, Chumporn, P. Siam, 20-23 March, 1919 (Nos. 4716, 4748, 4793).

"Iris greyish white; maxilla black, mandible pale grey; feet brownish".

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.
D. Bonhôte, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam i, 1915.
H. Robinson, Journ. F. M. S. Museum, s. v, 1915.

Total length ♂, 178, 173, 178, 178, 180, 178, 167, 180; ♀, 183, 179, 168; wing ♂, 85, 83, 81, 78, 82, 81, 80, 85; ♀, 77, 77, 80; tail ♂, 82, 80, 77, 73, 78, 82, 77, 85; ♀, 73, 78, 80; tarsus ♂, 18, 17, 17, 16, 18, 18, 18, 17; ♀, 18, 17, 17; bill from gape ♂, 21, 20, 20, 21, 22, 20, 20, 21; ♀, 21, 20.5, 19 mm.

Several of these specimens from the Pakchan and Tasan are practically topotypes of the race which was described as from Bankasoon. They are certainly conspecific with *I. olivacea* from the south of the Peninsula, Borneo and Sumatra; this name as the oldest taking precedence.

371. *Euptilosus euptilosus* (Jard. and Selby).

Brachypus euptilosus, Jard. and Selby, iii. Orn. iv, 1836, pl. iii (Singapore).

Criniger tristis, A., p. 303 (Pakchan, Bankasoon).

Pinarocichla euptilosa, C, i, p. 180 (S. Tenasserim); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 119 (Bangnara, Patani).

Pinarocichla eutilota, M. 2, p. 399 (Tenasserim; Siam; Malay Peninsula).

In the Malay Peninsula this bird always seems to be a somewhat rare and local species.

372. *Brachypodius atriceps atriceps* (Temm.).

Turdus atriceps, Temminck, Pl. Col 1822, pl. 147 (Java, restricted).

Lanius melanocephalus, Gm. (praeocc.).

Brachypodius melanocephalus (partim?) A., p. 318 (Mergui to Malewoon).

Micropus melanocephalus, (partim?), C., i, p. 181 (Tenasserim); F., p. 57 (Trang).

Microtarsus melanocephalus, L., p. 66 (Koh Lak); J., p. 173 (Pulau Lontar); K., p. 199 (Koh Lak); L., p. 107 (Ghirbi; Pulau Panjang and islets).

Micropus melanocephalus melanocephalus, M., p. 197 (partim; Tung Song).

Microtarsus melanocephalus melanocephalus, M. 2, p. 423 (partim: Malay Peninsula south of 10° N.)

♀. Tung Pran, Takuatung, P. Siam, 14 Feb. 1919 (No.

4016).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

3 ♂. Tapli, Pakchan, P. Siam, 6-7 March 1919 (Nos. 4457-8, 4473).

"Iris pale blue; bill and feet black."

Total length ♂, 180, 185, 173; ♀ 164; wing ♂, 78, 80, 78; ♀, 79; tail ♂, 78, 80, 75; ♀, 76; tarsus ♂, 14, 15, 15; ♀, 14; bill from gape ♂, 20, 21, 18; ♀, 17 mm.

This is the southern race with wings of 75-80 mm.

373. *Brachypodius atriceps major* Rob. and Kloss.

Brachypodius atriceps major, Robinson and Kloss, Journ. Fed. Malay States Mus. xi, 1923, p. 55 (North Cachar).

Brachypodius melanocephalus, (partim?), A., p. 318 (Mergui to Malewoon).

Micropus melanocephalus, (partim?), C., i, p. 181 (Tenasserim); ? Hopwood, Journ. Bombay Nat. Hist. Soc., xxvi, 1919, p. 856 (S. Tenasserim).

Micropus melanocephalus melanocephalus, M., p. 197 (partim: Patiyu)?

Microtarsus melanocephalus melanocephalus, M., 2, p. 423 (partim: Burma and Siam south to 10° N.).

♂. Namchut, Pakchan, P. Siam, 14 February 1919 (No. 4016).

"Iris pale blue; bill and feet black".

Total length 183; wing 86; tail 80; tarsus 16; bill from gape 20 mm.

The northern race with wings of 80-85 mm. is, so far, represented in Siam by the above example. It is possible that the Pakchan is somewhat beyond the proper range of this subspecies, as birds occur there with wings of 80 mm. and less, and the wings of three birds from Koh Lak measure 79 mm. There is no doubt an intermediate zone where, as well as intergrading, the two forms seem to inosculate: probably the true range of *B. a. major* stops at about Tavoy.

374. *Criniger gularis tephrogenys* (Jard. and Selby.)

Trichophorus tephrogenys, Jardine and Selby, Ill Orn., 1833, pl. 127 (Malacca: Hartert).

Criniger ochraceous, A., pp. 301, 515 (partim: Tavoy to Malewoon).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.¹

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Criniger tephrogenys, Hartert, Nov. Zool., ix, 1902, p. 558 (Malay Peninsula to Tenasserim); E., p. 86 (atani); F., p. 57 (Trang).

The difference between this species and the next was not generally recognised before Hartert (*l. c.*) cleared up the confusion between the two and showed their characters and distinctness. Unfortunately more recent authors, ignorant of Hartert's work, have continued to perpetrate the errors of their predecessors. Both birds, according to Hartert, are common in Tenasserim; and Tristram (Cat. Coll. Birds, 1889, p. 177) records both obtained on the same day by Davison at Bankasoon, S. Tenasserim, under the names *C. gutturalis* and *C. ochraceus*.

375. *Criniger gutturalis ochraceus* Moore.

Criniger ochraceus, Moore in Horsf. and Moore, Cat. Birds Mus. E. Ind. Co., i, 1854, p. 252 (Tenasserim); A., pp. 301, 515 (partim: Tavoy to Malewoon); Hartert, Nov. Zool., ix, 1902, p. 559; (Malay Peninsula to Tenasserim); L., p. 108 (Ghirbi).

**Criniger cabanisi*, Müller, (nec. Sharpe), A., p. 32 (Junk Seylon).

Criniger gutturalis, C., i, p. 185 (partim: S. Tenasserim).

**Criniger griseiceps*, B., p. 33 (Junk Seylon).

Criniger sordidus, Richmond, Proc. U. S. Nat. Mus., xxii, 1900, p. 320 (Trang); F., p. 57, (Trang); Robinson, Journ. Fed. Malay States Mus., v, 1915, p. 102 (Bandon).

Criniger salangae, Sharpe, Handlist of Birds, iii, 1901, p. 316 (Salanga I.): new name for *C. cabanisi* Müller.

Criniger gutturalis ochraceus, J., p. 173 (Langkawi).

Criniger pallida pallida, (nec Swinhoe), M., p. 193 (S. W. and P. Siam).

Criniger tephrogenys tephrogenys, M. 2, p. 362 (S. Tenasserim; S. W. Siam; Malay Peninsula).

♂. Victoria Point, S. Tenasserim, 24 Feb. 1919 (No. 4182).

♂. Mamoh, Pakchan Estuary, 28 Feb. 1919 (No. 4316).

*Without examining the actual specimens recorded by Müller under these names, it is not possible to allocate them with any confidence. No doubt Müller obtained examples of the two species of *criniger* recorded in this paper: we ourselves only met with *C. ochraceus* in the neighbourhood of Junk Seylon.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus., vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

3 ♂, 2 ♀. Tapli, Pakchan Estuary, P. Siam, 6-8 March 1919 (Nos. 4459-4463, 4471, 4472, 4505).

2 ♂, ♀. Tasan, Chumporn, P. Siam, 15-24 March 1919 (Nos. 4573, 4608, 4838).

Total length ♂, 231, 222, 225, 232, 237, 227 228; ♀, 206, 222, 225; wing ♂, 101, 101, 103, 98, 109, 101, 101; ♀, 101, 97, 97; tail ♂, 110, 103, 102, 98, 110, 103, 108; ♀, 103, 98, 102; tarsus ♂, 20, 19.5, 21, 20, 20, 21, —; ♀, 20, 20, 19; bill from gape ♂, 24, 23, 25, 23, 24, 25, 22; ♀, 25, 25, 24 mm.

"Iris brown or reddish brown; bill slate, culmen black; feet pale brown, pinkish brown or purplish brown".

It is disheartening to find that, in a modern paper on Siamese birds, there should be very considerable disregard of much previous literature on the subject, a good deal of it quite recent, with the result that alien races are imported into the fauna. The case of *Criniger pallida pallida* is one in point.

The bulbul now under discussion was, prior to 1902, known as *C. gutturalis* Bp., founded on Bornean birds, though Hume and Davison in 1878 correctly referred Tenasserim birds to *C. ochraceus* Moore, collected by Helfer in Central or South Tenasserim in about 1840.

In 1900 Richmond described the bird from Trang as *Criniger sordidus*, comparing it with *C. gutturalis* auct., probably *C. tephrogenys* Jard. and Selby.

In 1902 Hartert (Nov. Zool. ix, 1902, p. 558), in the course of an article on a collection of birds from Pahang, cleared up the confusion and showed that there are two species in the Malay Peninsula and Burma, viz., *C. ochraceus* Moore, from Tenasserim and *C. tephrogenys* Jard. and Selby (type fixed as *Malacca*).

In 1911 (Ibis, p. 57) we recorded further as *C. sordidus* specimens from Trang and Langkawi which had been compared with one of the paratypes, and stated that the distinctions between it and *C. ochraceus* were extremely fine.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Barmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

In 1915 (Ibis, p. 746), dealing with a series from S. E. Siam, Robinson pointed out that Helfer's name would have to replace Richmond's *sordidus*, as being the older, and that the southern (not the northern) bird required a name which was applied (*sacculatus*).

In 1917 (Journ. Fed. Malay States Mus. vii, p. 173) a specimen from Langkawi was referred to *C. g. ochraceus*, it being placed as a subspecies of *gutturalis* on the strength of recently received topotypes of that form from Borneo.

In October 1919 (Ibis, p. 570) we recorded *Criniger ochraceus* from Cochin China and *Criniger tephrogenys henrici* Oust., Bull. Mus. Paris, 1896, p. 183) from the low country of South Annam. *Criniger pallida grandis* Baker (Bull. Brit. Orn. Club, xxxviii, 1917, p. 15) from Yunnan (no exact locality specified) is probably the same as the Yunnan birds included by Oustalet in his type series of *C. henrici* (type locality Tonkin): it would appear to differ from the typical *henrici* only in rather larger size. Oustalet's wing lengths were 100–115 mm., Baker's are 114–119, and we found the wings of South Annam birds to be 100–108 mm.

Gyldenstolpe (L., p. 67) records both *C. sordidus* (wings 103–111) and *C. henrici* (wings 107–113) from North Siam, and intrinsically there is no reason why he should not be perfectly correct.

Without labouring the point, it is obvious that even if S. W. and Peninsular Siam bulbuls of this type are subspecifically identical with Hainan birds, which is to the last degree improbable, it will be the Hainan birds that will have to be named *C. gutturalis ochraceus* or *C. gularis tephrogenys*, and not the Siam birds *C. pallida pallida*.

376. *Alophoixus phaeocephalus phaeocephalus* (Hartl.).

Icos phaeocephalus, Hartl, Rev. Zool., 1844, p. 401 (Malacca).

Criniger phaeocephalus, A., p. 302 (Bankasoon; Malewoon); C., i, p. 183 (South Tenasserim).

Alophoixus phaeocephalus, F., p. 57 (Trang); M. 2, p. 368 (S. Tenasserim and Malay Peninsula).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♂, ♀. Tasan, Chumporn, P. Siam, 15-24 March 1919 (Nos. 4546, 4836).

"Iris red; bill plumbeous, culmen black; feet brownish pink or yellowish flesh."

Total length, ♂, 208; ♀, 190; wing ♂, 95; ♀, 88; tail ♂, 90; ♀ 87; tarsus ♂, 21; ♀, 19; bill from gape ♂, 33; ♀, 32, mm.

A Malaysian form, reaching its extreme northern limit at the Isthmus of Kra.

377. *Tricholestes criniger criniger* (Hay).

Brachypodius (?) criniger, Hay, Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 577 (Malacca).

Tricholestes criniger, A., p. 304 (Choungthancung to Malewoon); C., i, p. 186 S. Tenasserim); F., p. 57 (Trang); M., p. 194 (Tung Song).

Tricholestes criniger criniger, M., 2, p. 366 (S. Tenasserim and Malay Peninsula).

♂, ♀. Tapli, Pakchan, P. Siam, 2 March 1919 (Nos. 4368-9).

3 ♂. Tasan, Chumporn, P. Siam, 13-23 March 1919 (Nos. 4541, 4734, 4515).

"Iris grey to hazel; bill plumbeous, culmen blackish; feet olive to brown".

Total length ♂, 172, 170, 168, 161; ♀, 164 mm; wing ♂, 74, 70, 77, 72; ♀, 71; tail ♂, 70, 73, 73, 72; ♀, 67; tarsus ♂, 16, 15.5, 17, 16; ♀, 16; bill from gape ♂, 20, 17, 19.5, 18; ♀, 18 mm.

Another Malaysian species, which reaches its northernmost limit in this region. The Bornean bird, *T. c. viridis* (Bp.), is rather brighter, while the Sumatran representative, *T. c. sericea* (S. Müll.), is intermediate.

378. *Trachycomus zeylanicus* (Gm.).

Sturnus zeylanicus, Gmelin, Syst. Nat. i, 1788, p. 804 (Java).

Trachycomus ochrocephalus (Gm.) and auctt.

Trachycomus ochrocephalus, A., p. 300 (Mergui; Bopyin; Pakchan); C., i, p. 188 (Mergui to Malewoon); E., p. 86 (Patani); L., p. 108 (Ghirbi); M., p. 195 (Tung Song); M., 2, p. 402 (Tenasserim; Siam; Malay Peninsula).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

2 ♀, Tapli, Pakchan, P. Siam, 6 March 1919 (Nos. 4340, 4464).

"Iris red; bill black; feet dark brown to black"

Total length ♀, 280, 272; wing 116, 121; tail, 138, 113; tarsus, 27, 26; bill from gape, 28.5, 31. mm.

Sturnus zeylanicus Gm. (*l. c. s.*) based on the "Ceylonese Stare" of Latham, Syn. ii, pt. i, 1783, p. 11, has page priority over *Turdus ochrocephalus* Gm. (*t. c. p.* 821) based on the "Yellow-crowned Thrush" of Brown, Ill., p. 50, t. 22.

379. *Pycnonotus goiaver analis* (Horsf.).

Turdus analis, Horsf., Trans. Linn. Soc., xiii, 1820, p. 147 (Java).

Otocompsa analis, A., p. 308 (Mergui to Malewoon).

Loedorus analis, B., p. 27 (Junk Seylon).

Pycnonotus analis, C. i, p. 191 (Mergui southwards); D., p. 62 (Patani); E., p. 85 (Patani); F., p. 57 (Trang); K., p. 199 (Tachin); L., p. 108 (Pulau Panjang); Hopwood, Journ. Bombay Nat. Hist. Soc., xxvi, 1919, p. 856 (Mergui southwards).

Pycnonotus goiaver analis, M., 2, p. 410 (Tenasserim and Malay Peninsula).

♂. Victoria Point, S. Tenasserim, 24 Feb. 1919, No. 4179.

"Iris dark and hazel; bill and feet black".

Total length ♂, 192; wing, 86; tail, 87; tarsus 21; bill from gape 23 mm.

Not nearly so common in Siam as in the south of the Malay Peninsula.

380. *Pycnonotus finlaysoni finlaysoni* Strickl.

Pycnonotus finlaysoni, Strickland, Ann. & Mag. Nat. Hist. (i) xiii, 1844, p. 411 (Malacca: Hartert); C., i, p. 193 (Tenasserim); E., p. 85 (Patani); F., p. 58 (Trang; Langkawi; Terutau); G., p. 148 (Ratburi & Petchaburi); H., p. 149 (Koh Samui & Koh Pennan); L., p. 69 (Koh Lak); L., p. 109 (Ghirbi); Hopwood, Journ. Bombay Nat. Hist. Soc., xxvi, 1919, p. 856 (S. Tenasserim).

Ixus finlaysoni, A., p. 307 (Tavoy to Malewoon).

Loedorus finlaysoni, B., p. 28 (Junk Seylon)

Pycnonotus finlaysoni finlaysoni, M., p. 196 (Tung Song Patiye); M., 2, p. 412 (Tenasserim and Malay Peninsula).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♂, 2 ♀. Namchuk, Pakchan, P. Siam, 24-26 March 1919 (Nos. 4195, 4235, 4255).

♂, ♀. Mamoh, Pakchan, P. Siam, 26 March 1919 (Nos. 4268, 4269).

2 ♂, 3 ♀. Hat Sanuk near Koh Lak, S. W. Siam. 13-19 April 1919 (Nos. 5263-4, 5395-7).

"Iris dark; bill black; feet black."

Total length ♀, 188, 188, 183, 198, ♀, 187, 195, 186, 195, 183; wing ♂, 81, 75, 80, 83; ♀, — 80, 76, 80, 76, 73; tail ♂, 88, 82, 80, 88; ♀, 87, 90, 80, 83, 80, 78; tarsus ♂, 17.5, 18, 21, 19.5; ♀, 19, 20, 20, 19, 20, 18.5; bill from gape ♂, 21, 18.5, 21, 20; ♀, 20, 20, 18, 20, 20, 19 mm.

A common bulbul over the whole of P. Siam except the district of Patani, where it is not very numerous.

381. *Pycnonotus blanfordi robinsoni* Grant.

Pycnonotus robinsoni, O. Grant, Fasciculi Malayenses, Zool. iii, 1906, p. 85 (Patani); Kloss, Journ. F. M. S. Mus. iv, 1911, p. 231 (Tiang); H., p. 102 (Bandon).

Pycnonotus blanfordi, D., p. 61 (Patani).

Pycnonotus blanfordi robinsoni, K., p. 200 (Koh Lak).

Pycnonotus plumosus robinsoni, M., 2, p. 420 (S. W. and P. Siam)

4 ♂, 6 ♀, 1 sex inc., Koh Lak, S. W. Siam, 2-10 April 1919 (Nos. 4949, 4950, 4972, 5037, 5138, 5148, 5191, 5220, 5222, 5231, 5236).

2 ♂, 2 ♀. Hat Sanuk, near Koh Lak, S. W. Siam, 15-18 April 1919 (Nos. 5311, 5358, 5378-9).

"Iris grey; bill blackish, paler at tip; feet greyish brown.

Total length ♂, 205, 186, 205, 206, 195, 189; ♀, 181, 195, 205, 192, 202, 203, 199, 203; wing ♂, 88, 81, 83, 89, 85, 86; ♀, 82, 83, 87, 81, 87, 87, 84, 84; tail ♂, 94, 86, 90, 93, 92, 89; ♀, 88, 87, 90, 88, 93, 94, 92, 90; tarsus ♂, 21, 22, 22, 22.5, 21.5, 19; ♀, 21, 22, 20, 20, 21.5, 22, 20, 21.5; bill from gape ♂, 19, 20.5, 19, 22, 23, 21; ♀, 22, 20, 18, 18, 20, 18, 19, 22 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901. Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Very common in the scrubby country round Koh Lak, much rarer further south: the original types from Tanjong Patani being almost outside the normal range of the race.

This race is just separable from the Upper Burmese bird *P. b. blanfordi*. Baker (in M., p. 197) does not admit this; but he had probably not seen satisfactory typical material of *P. b. robinsoni*, which comes from the extreme south of Peninsular Siam.

382. *Pycnonotus plumosus plumosus* Blyth.

Pycnonotus plumosus, Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 567 (Singapore); C. i, p. 196 (Southern Tenasserim); F., p. 58 (Trang); J., p. 174 (Pulau Telibon): L., p. 108 (Ghirbi; Junk Seylon; Pulau Panjang); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 437 (Malewoon).

Ixus plumosus, A., p. 309 (Mergui to Malewoon).

Pycnonotus plumosus plumosus, M., 2, p. 419 (S. Tenasserim southwards).

2 ♂, ♀. Koh Rah, Takuapah, P. Siam, 15-17 Feb. 1919 (Nos. 4032, 4048, 4054).

1 ♂. Koh Pra Tung, Takuapah, P. Siam, 17 Feb. 1919 (No. 4085).

1 ♀. Kandhuli, Chaiya, P. Siam, 21 Sept. 1919.

"Iris red to chocolate; bill black; feet brown."

Total length ♂, 202, 193, 200; ♀, 193; wing ♂, 89, 87, 88; ♀, 82; tail ♂, 85, 83, 80; ♀, 83; tarsus ♂, —, 18, 19; ♀, 18; bill from gape ♂, —, 21, 20; ♀, 21 mm.

Much rarer in the north than further south.

383. *Pycnonotus brunneus brunneus* Blyth.

Pycnonotus brunneus, Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 568 (Malacca); L., p. 109 (Ghirbi and Junk Seylon).

Ixus brunneus, A., p. 312 (Mergui to Bankasoon); Hume, Stray Feathers, iii, 1875, p. 322 (Tenasserim).

Pycnonotus simplex, C., i, p. 197 (Mergui southwards).

Pycnonotus simplex, C., i, p. 196 (Southern Tenasserim and Malay Peninsula); E., p. 86 (partim: Patani); F., p. 58 (Trang); J., p. 174 (Terutau Island).

Pycnonotus simplex simplex, M., 2, p. 421 (Mergui southwards).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♂, ♀. Tung Pran, Takuatung, P. Siam, 13-14 Feb. 1919 (Nos. 3969, 4005).

♀. Victoria Point, S. Tenasserim, 24 Feb. 1919 (No. 4183).

♀. Tapli, Pakchan, P. Siam, 2 March 1919 (No. 4372).

"Iris orange or red; bill black; feet greenish brown".

Total length ♂, 184; ♀, 188, 185, 193; wing ♂, 90; ♀, 83, 81, 81; tail ♂, 85; ♀, 77, 78, 78; tarsus ♂, 18; ♀, 19, 20, 19; bill from gape ♂, 21; ♀, 20, 20, 20 mm.

All birds previously referred to *P. simplex* from north of Junk Seylon are probably this bird, which can be separated by its larger size, more buffy underparts and the colour of the iris, which is never white or cream.

384. *Pycnonotus simplex simplex* Less.

Pycnonotus simplex, Lesson, Rev. Zool, 2, 1839, p. 167 (Sumatra); E., p. 86 (partim: Patani).

Microtarsus olivaceus, Moore, Cat. Birds. Mus. East India Co., i, 1854, p. 259 (Malacca).

The only authentic specimen from Siam with which we are acquainted is a female from Lay Song Hong, Trang, collected by Dr. W. L. Abbott on 6th December, 1896. Iris recorded as "white," bill black, paler at base, feet fleshy brown. Wing 80 mm. (measured in skin). This seems to be the most northerly specimen on record.

385. *Pycnonotus erythrophthalmos erythrophthalmos* (Hume).

Ixos erythrophthalmos, Hume, Stray Feathers, vi, 1878, p. 314 (Pakchan Estuary).

Ixos pusillus, A., p. 312 (Pakchan; Bankasoon).

Pycnonotus pusillus, Salvad., praeocc.

Pycnonotus salvadorii, C., i, p. 197 (South Tenasserim).

Pycnonotus pusillus, Williamson, Journ. N. H. S. Siam, ii, 1916, p. 59 (Patani).

Pycnonotus erythrophthalmus erythrophthalmus, M. 2, p. 422 (no distribution).

♀. Tasan, Chumporn, P. Siam, 23 March 1919 (No. 4792).

"Iris red, orbital ring yellow; bill black, gape yellow; feet pinkish brown."

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901. Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Total length, 167; wing, 72; tail, 73; tarsus, 15.5; bill from gape 18.5 mm.

386. *Pycnonotus cyaniventris cyaniventris* Blyth.

Pycnonotus cyaniventris, Blyth, Journ. Asiat. Soc. Bengal, xi, 1841, p. 782 (Singapore).

Ixidia cyaniventris, A., p. 320 (Malewoon).

Rubigula cyaniventris, C., i, p. 200 (extreme south Tenasserim).

Pycnonotus cyaniventris cyaniventris, M., 2, p. 416 (Tenasserim; Siam; Malay Peninsula).

1 ♀. Tasan, Chumporn, P. Siam, 18 March 1919 (No. 4682).

"Iris grey; bill black; feet slate".

Total length, 161; wing, 76; tail, 68; tarsus, 15; bill from gape, 18 mm.

This species should have been included in our paper on Birds from the Northern portion of the Malay Peninsula (Ibis, 1911): specimens were obtained in Trang in October 1909.

***Molpastes haemorrhous klossi* Gyld.**

Molpastes atricapillus klossi, Gyldenstolpe (Robinson, errore!), Bull. Brit. Orn. Club, xli, 1920, p. 12 (North Siam).

Molpastes atricapillus, A., pp. 322, 516 (partim; Tavoy; Nwalabo; Shymotee); C. i, p. 199 (partim; Central Tenasserim).

Molpastes haemorrhous chrysorrhoides, M. 2, p. 387 (partim: Siam and Tenasserim).

It is probable that this bird occurs in our area, as Mr. W. J. F. Williamson has obtained a series from Sriracha on the eastern side of the Inner Gulf of Siam. Baker (M. 2, p. 387) does not admit that Siamese birds differ from the Chinese form, *M. h. chrysorrhoides* ("Birds from North and Central Siam are also of this race"), though stating that the Chinese bird has wings ranging from 90 to 111 mm. Gyldenstolpe's type series of twenty-one birds from North Siam have wings 85.5 to 93.4 mm. long, and the wings of six specimens of Williamson's from South Central Siam vary from 81 to 88 mm. Hume and Davison's series taken in North Tenasserim, between Salwin and Tavoy, had wings of 80 to 95 mm., Oates

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,

iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

gives for Kareni and Tenasserim birds wing measurements of 92 and 94 mm., while Baker records 87 mm. for Tenasserim birds.

It is obvious that the White-eared Red-vented Bulbul decreases considerably in size from north to south, and that Gyldenstolpe was well justified in naming the smaller southern birds.

***Molpastes aurigaster thais* Kloss.**

Molpastes aurigaster thais, Kloss, Journ. Nat. Hist. Soc. Siam, vi, 1924, p. 291 (Bangkok).

This form of the Orange-vented Bulbul which has been met with at Bangkok and Khao Sebah, Chantabun, may well be found eventually in our area.

387. *Otocompsa jocosa erythrotis* (Bp.).

Ixos erythrotis Bonaparte, Consp. Gen. Av. 1, 1850, p. 265 (Java).

Otocompsa emeria, A., pp. 321, 515 (Tavoy to Bankasoon); E., p. 84 (Patani); F., p. 58 (Trang); H., p. 102 (Bandon); L., p. 109 (Ghirbi; Junk Seylon).

Otocompsa pyrrhotis, B., p. 26 (Junk Seylon).

Otocompsa jocosa, C., i, p. 198 (Tenasserim); D., p. 62 (Patani); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 437 (Malewoon).

Otocompsa emeria emeria, M., p. 194 (Tung Song; Maprit).

Otocompsa emeria peguensis, Baker, Fauna Brit. India, Birds, ed. 2, i, 1922, p. 396 (Pegu.).

1 ♂. Tung Pran, Takuatung, P. Siam, 13 Feb. 1919 (No. 3986).

2 ♂, 1 ♀. Namchuk, Pakchan, P. Siam, 25-26 Feb. 1919 (Nos. 4220, 4225, 4256).

"Iris dark; bill and feet black".

Total length ♂, 206, 192, 185; ♀, 184; wing ♂, 85, 81, 82; ♀, 73; tail ♂, 90, 88, 93; ♀, 82; tarsus ♂, 20, 21.5, 20.5; ♀, 20; bill from gape ♂, 22, 20, 22; ♀, 21 mm.

Since our key to the Bulbuls was printed (in which this bird is entered as *Otocompsa emeria peguensis*) we have learned that *jocosa* Linn. has priority over *emeria* as the species name; and have found that the south-eastern form has been described and named by Bonaparte. It is the smallest of the races, which are *O. jocosa jocosa*, China; *O. j. emeria*, Bengal; *O. j. fuscicaudata*, Madras; *O. j. erythrotis*, Java.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

388. *Otocompsa flaviventris minor* Kloss.

Otocompsa flaviventris minor, Kloss, Ibis, 1918, p. 200 (Koh Lak ; Malay Peninsula) ; L., p. 109 (Ghirbi).

Rubigula flaviventris, A., pp. 317, 515 (Nwalabo to Pakchan).

Otocompsa flaviventris, C. i. p. 199 (Tenasserim) ; G., p. 290 (Ratburi and Petchaburi).

Otocompsa flaviventris johnsoni, M, p. 194 (partim : Tung Song).

Mr. Stuart Baker has admitted that the specimens from West and Peninsular Siam recorded by him as *O. f. johnsoni* are merely this form. The other race, so far as is known, does not occur west of the Menam River (cf. Kloss, Journ. N. H. Soc. Siam, iii, 1919, p. 448 ; id. op cit. iv, 1920, p. 51).

389. *Rubigula squamata webberi* (Hume).

Iridia webberi, Hume, Stray Feathers, viii, 1879, pp. 40, 63 (Tongka or Junk Seylon).

Rubigula webberi, F., p. 59 (Trang) ; M., p. 196 (Tung Song).

Rubigula squamata webberi, M. 2, p. 409 (Tenasserim ; Siam ; Malay Peninsula).

Very common in Trang, but always very local in its distribution.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

TIMALIIDAE.

BABBLERS.

1	{ Feathers of the back and rump much lengthened	Macronus p. <i>ptilosus</i>	2
	{ Feathers not so lengthened .. ..	.. ..
2	{ External aspect of wing markedly parti-coloured .. ..	.. ..	3
	{ External aspect of wing practically uniform .. ..	.. ..	7
3	{ Wing about 4 inches .. ..	.. ..	4
	{ Wing less than 3.25 inches .. ..	.. ..	5
4	{ Back and breast ashy	<i>Trochalopteron m. melanostigma</i>	
	{ Back and breast brown	<i>T. m. peninsulæ</i>	
	{ Underside pure grey	<i>Pteruthius flaviscapis aeralatus</i> , ♂	
5	{ Underside dull buffy	<i>P. f. aeralatus</i> , ♀	
	{ Underside bright yellow .. ..	.. ..	6
6	{ Tail-coverts crimson	<i>Mesia a. argentaurus</i> ♂	
	{ Tail-coverts fulvous	<i>M. a. argentaurus</i> , ♀	
7	{ Feathers of head soft, silky, adpressed	<i>Eupetes m. macrocerus</i>	
	{ Feathers of head normal .. ..	.. ..	8
8	{ Bill markedly curved, longer than head .. ..	.. ..	9
	{ Bill not markedly curved, shorter than head .. ..	.. ..	11
9	{ Sides of body streaked black and white,	<i>Pomatorhinus hypoleucus tickellii</i>	
	{ Sides of body not thus streaked .. ..	.. ..	10
10	{ Breast pale ferrugineous	<i>P. ferruginosus albicularis</i>	
	{ Breast white	<i>P. fastidiosus olivaceus</i>	
11	{ Larger, wing more than 4.25 inches .. ..	.. ..	12
	{ Smaller, wing less than 3 inches .. ..	.. ..	18
12	{ Colour bluish black .. ..	.. ..	13
	{ Colour not bluish black .. ..	.. ..	14
13	{ Bases of the contour-feathers dark	<i>Myiophoneus e. eugenei</i>	
	{ Bases of the contour-feathers white	<i>M. e. crassirostris</i>	
14	{ Crown white .. ..	.. ..	15
	{ Crown not white .. ..	.. ..	16
15	{ Breast and abdomen entirely white	<i>Garrulax leucolophus diardi</i>	
	{ Breast white, abdomen rufous	<i>G. l. belangeri</i>	
16	{ Crown slaty blue	<i>Dryonastes chinensis</i>	
	{ Crown brown .. ..	.. ..	17
17	{ With a black malar stripe	<i>Garrulax pectoralis meridionalis</i>	
	{ No black malar stripe	<i>G. moniliger fuscata</i>	
18	{ With green or yellow in the plumage .. ..	.. ..	19
	{ No green or yellow in the plumage .. ..	.. ..	22
19	{ Head streaked with black	<i>Stachyridopsis chrysaea chrysops</i>	
	{ Head not streaked .. ..	.. ..	20
20	{ Under side uniform greyish white	<i>Herpornis zantholeuca interposita</i>	
	{ Under side yellow, streaked with black .. ..	.. ..	21
21	{ Streaks coarser, tail and wings more rufous	<i>Mizornis rubricapilla pileata</i>	
	{ Streaks finer, tail and wings more olive	<i>M. r. connectens</i>	
	{ Mantle spotted with white .. ..	.. ..	23
22	{ Mantle streaked with fuscous .. ..	.. ..	24
	{ Mantle neither spotted nor streaked .. ..	.. ..	26
23	{ Crown streaked, breast white	<i>Kenopia striata</i>	
	{ Crown uniform, breast rufous	<i>Thringorhina striolata guttata</i>	

24	{ Throat, breast and belly uniformly streaked ..	<i>Corythocichla l. leucosticta</i>	
	{ Throat white, unstreaked ..	..	25
25	{ Wing about 3.5 inches, tail longer ..	<i>Turdinus m. macrodactylus</i>	
	{ Wing about 2 inches, tail shorter ..	<i>Turdinulus epilepidotus granti</i>	
26	{ Breast and flanks strongly streaked with blackish ..	<i>Pellorneum ruficeps subochraceum</i>	
	{ Breast and flanks not so streaked ..	..	27
27	{ Crown markedly distinct from nape ..	..	28
	{ Crown and nape not markedly different ..	..	32
28	{ Crown blackish, streaked with greyish white ..	<i>Stachyris nigriceps davisoni</i>	
	{ Crown black or blackish, not streaked ..	..	29
	{ Crown rufous throughout ..	..	30
	{ Crown rufous anteriorly, black posteriorly ..	..	31
29	{ Abdomen rufous ..	<i>Dryocatataphus capistratus nigrocapitatus</i>	
	{ Abdomen white ..	<i>Horizillas affinis</i>	
30	{ Breast finely streaked, crown uniform ..	<i>Timalia pileata jerdoni</i>	
	{ Breast not streaked, crown streaked ..	<i>Stachyridopsis ruficeps obscura</i>	
31	{ Larger, wing about 3.5 inches ..	<i>Horizillas magna</i>	
	{ Smaller, wing about 3 inches ..	<i>H. c. cinerea</i>	
32	{ Throat deep black, different from abdomen ..	<i>Stachyris nigricollis</i>	
	{ Throat striped grey and white, different from abdomen ..	..
	{ Throat grey, uniform with abdomen ..	<i>S. poliocephala diluta</i>	
	{ Throat white or buffy ..	<i>Cyanoderma e. erythroptera</i>	33
33	{ Above bright rufous ..	<i>Erythrocichla b. bicolor</i>	
	{ Not bright rufous above ..	..	34
34	{ Uniform white or whitish below, or slightly infuscated ..	..	35
	{ Not uniform white or whitish below, much washed with colours ..	..	39
35	{ No white tips to tail-feathers, tail square or rounded ..	..	36
	{ With white tips to tail-feathers, tail much graduated ..	..	38
36	{ A black malar stripe ..	<i>Horizillas m. magnirostris</i>	
	{ No black malar stripe ..	..	37
37	{ Bill long, compressed laterally; throat pure white ..	<i>Aethostoma r. rostratum</i>	
	{ Bill short, not compressed, throat sullied white ..	<i>Alcippe c. cinerea</i>	
38	{ Primaries edged with violet ..	<i>Siva cyanuroptera sordidior</i>	
	{ Primaries dusky ..	<i>Staphidia s. striata</i>	
39	{ Sides of head grey ..	<i>Anuropsis m. malaccensis</i>	
	{ Sides of head not grey ..	..	40
40	{ Forehead with pale shaft-streaks ..	..	41
	{ No pale shaft-streaks on forehead ..	..	43
41	{ Underparts duller, flanks fuscous; wing about 2.7 inches ..	<i>Malacocincla a. abbotti</i>	
	{ Underparts brighter, flanks buffy; wing less than 2.5 inches ..	..	42
42	{ Less richly coloured ..	<i>Dryocatataphus t. tickelli</i>	
	{ More richly coloured ..	<i>D. t. australis</i>	
43	{ Larger, wing more than 2.75 inches ..	<i>Malacocincla sepiaria tardinata</i>	
	{ Smaller, wing less than 2.75 inches ..	..	44

44	{ Tail shorter, flanks and breast much infuscated	<i>Heteroxenicus l. leucophris</i>	
	{ Tail longer, flanks and breast paler .. ..	.. ..	45
45	{ A deep black postocular stripe	<i>Alcippe nipalensis fratercula</i>	
	{ No black postocular stripe	<i>A. poioicephala davisoni</i>	

Dryonastes chinensis subsp.

Lanius chinensis, Scop. Del. Flor. et Faun. Insubr, ii, 1786, p. 86 (China).

Dryonastes chinensis G., p. 148 (Ratburi and Petchaburi); Hopwood, Journ. Bombay N. H. Soc. xxvi, p. 854 (Nwalabo).

This bird may probably be found in our area: it is more likely to be *D. c. leucogenys* (Blyth), from Pegu, than the typical Chinese form. Salvadori has given the name *Dryonastes propinquus* to a Tenasserim bird (Ann. Mus. Civ. Gen. (6) 1915, p. 6): that may also refer to the present one.

390. *Garrulax leucolophus diardi* (Less.).

Turdus diardi, Less. Tr. d'Orn, 1831, p. 408 (Siam).

Garrulax leucogaster, Walden P. Z. S. 1866, p. 548 (Siam); Hume, Stray Feathers, ix, 1880, p. 292 (hills between Tavoy and Siam).

Garrulax diardi, C, i, p. 35 (frontier hills between Tavoy and Siam); G., p. 148 (Ratburi and Petchaburi).

Garrulax leucolophus diardi, L., p. 53 (Koh Lak and inland); K., p. 233 (Koh Lak); M., p. 182; M2, p. 148 (S. E. Tenasserim).

2 ♂, 3 ♀. Koh Lak, Rajburi, S. W. Siam, 1-5 April 1919

[Nos. 4897-9, 4948, 5065].

1 ♂. Hat Sanuk, Ratburi, S. W. Siam, 13 April 1919 [No. 5286].

"Iris red; bill black; feet greyish brown."

Total length ♂, 288, 303, 285; ♀, 276, 276, 265; wing ♂, 131, 135, 136; ♀, 128, 133, 132; tail ♂, 135, 128, 130; ♀, 122, 125, 130; tarsus ♂, 44.5, 43, 46; ♀, 43.5, 44, 44; bill from gape ♂, 35, —, 34; ♀, 32, 31, 34 mm.

All these specimens are quite adult and have a broad grey collar separating the maroon of the mantle from the white of the head. They also have the centre of the abdomen white, but vary much in the amount of chocolate brown on the flanks which is very pronounced in the bird from Hat Sanuk, and a pair from Koh Lak.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915

Specimens from Cochin China are similarly variable and have the maroon of the mantle brighter; low country Annam birds are duller.

Baker (M., p. 182) says that East Tenasserim birds are not truly typical but approach *belangeri*: that may be the case further north, but the present series are inseparable from specimens from East Siam and South Annam, which are alike.

In stating that *diardi* occurs in South Yunnan and Siam, and *belangeri* in the Shan States and Annam, he does violence to reasonable distribution, for one form would divide the range of the other. We find Annam birds indistinguishable from Siamese *diardi*. Actually, *leucolophus* (Hardwar, United Provinces) occurs in the north-west, *diardi* (Siam) in the south-east and *belangeri* (Pegu) between.

***Garrulax leucolophus belangeri* Less.**

Garrulax belangeri, Less. Tr. d'Orn., 1831, p. 648 (Pegu); A., p. 286 (Tavoy); C. i, p. 33 (Tenasserim south to Tavoy).

Garrulax leucolophus diardi, M. 2, p. 148 (Tenasserim).

391. *Garrulax moniliger fuscata* Baker.

Garrulax moniliger fuscata, Baker, Bull. Brit. Orn. Club, xxxviii, 1918, p. 64 (Tavoy); M., p. 183 (S. Burma and Malaya); M. 2, p. 152 (Tenasserim and W. Siam).

Garrulax moniliger, A., pp. 291, 515 (Tavoy); C. i, p. 35 (partim: Tenasserim south to Tavoy); Oates, Faun. Brit. Ind. Birds, i, 1889, p. 81 (partim: Tenasserim).

Garrulax moniliger mouhoti, K., p. 232 (partim: Lower Burma).

2 ♂, 1 ♀. Hat Sanuk, near Koh Lak, S. W. Siam, 13-17 April 1919 [Nos. 5274, 5331, 5360].

"Iris yellow; bill greenish horn, paler at tip; feet brownish grey, toes greyer".

Total length ♂, 290, 280; ♀, 253; wing ♂, 126; 126; ♀, 128; tail ♂, 138, 134; ♀, 142; tarsus ♂, 42 (worn), 39; ♀, 41; bill from gape ♂, 31.5, 32; ♀, 31.5 mm.

This race differs from *mouhoti* Sharpe in being generally slightly paler above, with a paler nuchal band: below the rufous colouring is paler but much more extensive, spreading over almost

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

the whole of the under-surface except the throat; whereas in *mouhoti* a broad median area is generally white. The latter has been obtained by Mr. Williamson at Sriracha and Pak Jong. The Menam River is probably the boundary line between the two forms.

392. *Garrulax pectoralis meridionalis* Robinson & Kloss.

Garrulax pectoralis meridionalis, Rob. & Kloss, Bull. Brit. Orn. Club, xl, 1919, p. 11 (Hat Sanuk, S. W. Siam).

Garrulax pectoralis, C. i, p. 36 (partim: Muleyit, Kaukarit, Thungyeen Valley)?; Oates Faun. Brit. Ind. Birds, i, 1889, p. 80 (partim: Tenasserim)?; I., p. 54 (N. Siam)?

Garrulax pectoralis semitorquata, M. 2, p. 151 (partim Siam)?

♂. Hat Sanuk, near Koh Lak, Ratburi, S. W. Siam, 19 April 1919 [No. 5403].

"Iris reddish brown, edge of eyelids yellow; bare skin of head bluish slate; bill greenish horn; feet greenish leaden."

Total length 341; wing 141; tail 135; tarsus 44; bill from gape 37 mm.

This form can be separated from *G. p. semitorquata* Grant, of Hainan, by larger size and unbroken pectoral band, and from *G. p. pectoralis* by the buff tips to the tail feathers and the buffy, not white, edging to the primaries.

393. *Eupetes macrocerus macrocerus* Temm.

Eupetes macrocerus, Temm. Pl. Col., pl. 516, 1831 (Padang, Sumatra).

Eupetes macrocerus, H., p. 103 (Khao Nawng, Bandon).

Eupetes macrocerus griseiventris, Stuart Baker, Bull. Brit. Orn. Club, xxxviii, 1917, p. 8 (Tung Song); Robinson & Kloss, Ibis, 1918, p. 584 (critical remarks); Stuart Baker, Ibis, 1918, p. 593; M., p. 184.

Mr. Stuart Baker (Ibis, *l.c.*) has misunderstood the gist of our remarks: we did not condemn his race because it was founded on three specimens only, but because those specimens, together with one of ours from the same neighbourhood, show no characters which cannot be matched in the typical form. Our adult specimen from Khao Nawng, which would admittedly belong to *E. m. griseiventris* if that race was valid, can be absolutely matched by specimens from

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

the south of the Peninsula, while the type of Baker's proposed race in the Natural History Museum can be matched exactly by the following skins from Malacca:—Nos. 86/10/1/2654, 2655, 2658; 65/6/30/155. South Malayan examples, moreover, are identical with topotypes from Sumatra, and Temminck himself describes the belly of his type as grey "le milieu du ventre et l'abdomen sont d'un gris fonce"

Therefore, whether *E. m. griseiventris* is proposed for the whole of the Peninsula, or the north only, it cannot stand. Continental birds are the same as Sumatran ones. The Bornean bird, however, is slightly different.

***Trochalopteron melanostigma melanostigma* (Blyth).**

Garrulax melanostigma, Blyth, Journ. Asiat. Soc. Bengal, xxiv, 1855, p. 268 (Muleyit, Tenasserim).

Trochalopteron melanostigma, Hopwood, Journ. Bombay N. H. Soc. xxvi, 1919, p. 354 (Nwalabo).

Trochalopteron erythrocephalum melanostigma, M. 2, p. 167 (Muleyit Mountain).

The typical race of this Laughing Thrush has never been found in Siam, but not improbably occurs on the higher hills on the Tenasserim border.

394. *Trochalopteron melanostigma peninsulae* Sharpe.

Trochalopteron peninsulae, Sharpe, P. Z. S. 1887, p. 436, pl. xxxvii (Gunong Ijau, Perak); H., p. 103 (Khao Nawng, Bandon).

The pair above referred to, from 3,500 ft. in Bandon, are certainly very much closer to the Malayan than they are to be Tenasserimese race, but have the crown and throat very slightly paler.

395. *Pomatorhinus olivaceus fastidiosus* Hartert.

Pomatorhinus schisticeps fastidiosus, Hartert, Bull. Brit. Orn. Club xxxvi, 1916, p. 81 (Trang).

Pomatorhinus olivaceus, A., pp. 283, 515 (partim: Tavoy to Bankasoon); C. i, p. 71 (partim: S. Tenasserim); Hume Stray Feathers, ix, 1880, p. 117 (Kussoom); F., p. 59 (Trang); H., p. 103 (Bandon); Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 855 (Tavoy River).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Pomatorhinus olivaceus olivaceus, Harington, Journ. Nat. Hist. Soc. Bombay, xxiii, 1914, p. 332 (partim: Tenasserim); M. 2, p. 209 (S. Tenasserim; Malay Peninsula).

Pomatorhinus olivaceus siamensis, Baker, Bull. Brit. Orn. Club xxxviii, 1917, p. 8; M., p. 184 (Patiyu).

♂, ♂. Tapli, Pakchan, P. Siam, 6-7 March 1919 [Nos. 4448, 4482].

3 ♂. Tasan, Chumporn, P. Siam, 15-22 March 1919 [Nos. 4604, 4725, 4773].

"Iris pale orange or yellow, in one case lavender; bill yellow, black at extreme base of upper mandible; feet pale greenish slate".

Total length ♂, 213, 218, 230, 225; ♀, 214; wing ♂, 91, 95, 93, 96; ♀, 92; tail ♂, 94, 103, 102, 104; ♀, 95; tarsus ♂, 31.5, 32, 32, 34; ♀, 31; bill from gape ♂, 29, 30, 29.5, 29.5; ♀, 30 mm.

From north to south, along the Tenasserim-Siam hill ranges, the following races of this Scimitar-billed Babbler have been described.

- (1). *Pomatorhinus olivaceus ripponi* Harington.
Bull. Brit. Orn. Club, xxvii, 1910, p. 9 (Shan States).
Specimens examined from Me Wang, North Siam.
- (2). *Pomatorhinus olivaceus olivaceus* Blyth.
Journ. Asiat. Soc. Bengal, xvi, 1847, p. 451 (Ye, Tenasserim).
- (3). *Pomatorhinus olivaceus siamensis*, Baker, *loc. cit. supra* (Patiyu, S. W. Siam).
- (4). *Pomatorhinus olivaceus fastidiosus*, Hartert, *loc. cit. supra* (Trang, Peninsular Siam).

Nos. 1 and 4 are sufficiently distinct from each other, being the extremes of the range: No. 2, as might be expected from its locality, is intermediate; but we still remain sceptical as to the validity of Baker's No. 3, though his amended remarks make it appear that his race may come very near to the form we have recently described from the mountains of Annam, which, however, has a decidedly smaller bill (*P. o. annamensis*, Ibis, 1919, p. 577).

396. *Pomatorhinus hypoleucus tickelli* Blyth.

Pomatorhinus hypoleucus var., Blyth, Journ. Asiat. Soc. Bengal xxiv, 1855, p. 273 (Muleyit).

Pomatorhinus tickelli, Blyth, Tickell, Ibis, 1863, p. 113 (Muleyit); C, i, p. 76.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonholte, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Orthorhinus tickelli, Hume, Stray Feathers, v, 1877, p. 32 (Muleyit).

Pomatorhinus hypoleucus tickelli, M. 2, p. 223 (Tenasserim).

2 ♀. Hat Sanuk, near Koh Lak, S. W. Siam, 16 April 1919
[No. 5336-7].

"Iris chestnut; bill greyish green, darker on culmen, whitish at tip; feet greenish grey, greyer on toes."

Total length 275, 270; wing 102 (worn), 107; tail 112, 108; tarsus 37.5, 38; bill from gape 42, 43 mm.

Gyldenstolpe obtained this species in North Siam and we have described a closely allied race from Cochin China: *P. h. wrayi*, the representative form in the mountains of the Malay Peninsula is very distinct.

Pomatorhinus ferruginosus albigulare Blyth.

Pomatorhinus albigularis, Blyth, Journ. Asiat. Soc. Bengal, xxiv, 1855, p. 274 (Muleyit); A., p. 514 (Nwalabo); Blyth, Birds of Burma, 1875, p. 113 (Tavoy); C. i, p. 74 (S. Tenasserim).

Pomatorhinus ferruginosus albigulare, M. 2, p. 215 (Tenasserim South to Tavoy).

This Scimitar-babbler may possibly occur in the mountains of the border.

Staphidia striata striata (Blyth).

Icalus striatus, Blyth, Journ. Asiat. Soc. Bengal, xxviii, 1859, p. 413 ("mountainous interior of the Tenasserim provinces").

Staphidia striata, Hopwood, Journ. Bombay N. H. Soc. xxvi, 1919, p. 855 (Nwalabo).

Staphidia striata striata, M. 2, p. 311 (Tenasserim).

Mr. Hopwood states that this species was common at 3,000 ft. on Nwalabo; we have only seen a specimen from Koon Tan, North Siam, obtained by Mr. W. J. F. Williamson, which is at present the record for the Kingdom.

397. *Timalia pileata jerdoni* Wald.

Timalia jerdoni, Walden, Ann & Mag. Nat. Hist. (4) x, 1872, p. 61 (Khasia Hills).

Timalia pileata jerdoni, Williamson, Journ. N. H. Soc. Siam iii, 1918, p. 17 (Nong Khae, S. W. Siam), M. 2, p. 227 (practically all Burma).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Williamson's specimens are the only ones definitely known to us from the area: it is more than doubtful if the species really occurs at all in the Malay Peninsula, south of the isthmus.

398. *Pellorneum ruficeps subochraceum* Swinh.

Pellorneum subochraceum, Swinhoe, Ann. & Mag. Nat. Hist. (4) vii (1871), p. 259 (Tenasserim); A., pp. 278, 514 (Tavoy to Bankasoon); C. i., p. 66 (Tenasserim to Tongka); E., p. 83 (Patani); F., p. 59 (Trang, Langkawi Islands); H., pp. 103, 149 (Bandon & Koh Samui); I., p. 56 (Koh Lak); J., p. 175 (Langkawi & Lontar Islands); K., p. 202 (Koh Lak); L., p. 109 (Ghirbi and Junk Seylon).

Pellorneum minor, B., p. 19 (Junk Seylon).

Pellorneum ruficeps subochraceum, M., p. 185 (Klong Wang Hip and Patiyyu); Gyldenstolpe, Ibis, 1920, p. 481 (throughout Siam); M. 2, 239 (Tenasserim; Malay Peninsula).

Pellorneum ruficeps minus, Gyldenstolpe (nec Hume), Ibis, 1920, p. 481 (Puket).

♂, ♀. Mamoh, Pakchan, P. Siam, 27 Feb. 1919 [Nos. 4284-5].

4♂, 2♀. Tapli, Pakchan, P. Siam, 3-9 March 1919 [Nos. 4379, 4388-9, 4405, 4411, 4518].

♂, ♀. Tasan, Chumporn, P. Siam, 14-15 March 1919 [Nos. 4584, 4599].

♂. Koh Lak, Ratburi, S. W. Siam, 2 April 1919 [No. 4951].

3♂, ♀. Hat Sanuk, near Koh Lak, Ratburi, S. W. Siam, 12-18 April 1919 [Nos. 5261, 5281, 5332, 5382].

"Iris brown, orbits greenish, bill greenish horn, culmen dark, base yellow; feet flesh."

Total length ♂, 165, 168, 158, 160, 168, 166, 165, 162, 165, 165; ♀, 158, 153, 158, 158, 157; wing ♂, 70, 67, 64, 65, 67, 68, 68, 68, 68, 70; ♀, 67, 69, 65, 63, 67; tail ♂, 68, 68, 61, 63, 63, 67, 64, 68, 67, 72; ♀, 62, 64, 58, 63, 65; tarsus ♂, 26, 26, 25.5, 26, 25, 26, 25, 25, 24, 26; ♀, 26, 25.5, 26, 25, 23 (app.); bill from gape ♂, 21, 22, 20, 21, 20, 22, 19, 21, 20, 19; ♀, 20.5, 20, 20, 18, 18.5 mm.

The form *Pellorneum minor* Hume, from Thayetmyo, with striped back allied to *P. mandelli*, has been recorded from Junk Seylon by Muller and admitted by Gyldenstolpe to the Siamese list on his authority.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901. Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

The identification is, however, erroneous: we have examined specimens from the island and they belong to the present species, *P. r. subochraceum*.

399. *Malacocincla abbotti abbotti* Blyth.

Malacocincla abbotti, Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 601 (Ramree Island, Arakan); J., p. 175 (Langkawi, Terutau and Lontar Islands); L., p. 109 (Junk Seylon and Pulau Panjang); M., p. 186 (Tung Song and Patiyu).

Trichastoma abbotti, A., pp. 259, 513 (Nwalabo to Malewoon); B., p. 19 (Junk Seylon).

Turdinus abbotti, C. i, p. 58 (S. Tenasserim and Malay Peninsula); D., p. 64 (Patani); F., p. 59 (Trang and Langkawi); Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 855 (S. Tenasserim).

Turdinus olivaceus, H., pp. 103, 149 (Bandon and Koh Samui).

Turdinus abbotti abbotti, I., p. 57 (Koh Lak).

Malacocincla abbotti abbotti, K., p. 202 (Malay Peninsula south to Penang).

Malacocincla sepiaria abbotti, M. 2, p. 260, pl. vi, (Burma; Siam, Malay Peninsula).

2 ♂. Tung Pran, Takuapa, P. Siam, 14 Feb. 1919 [Nos. 4008, 4021].

4 ♂, 2 ♀, 2 ♀ imm. Koh Rah, Takuapa, 15-16 Feb. 1919 [Nos. 4034, 4042-45, 4069-71].

2 ♂, 3 ♀. Delisle Island, Renong, P. Siam, 19 Feb. 1919 [Nos. 4126, 4129, 4130, 1, 2].

♂. Victoria Point, South Tenasserim, 24 Feb. 1919 [No. 4177].

2 ♂. Namchut, Pakchan, P. Siam, 25-28 Feb. 1919 [Nos. 4227, 4317].

♀. Tapli, Renong, P. Siam, 5 March 1919 [No. 4433].

3 ♀. Tasan, Chumporn, P. Siam, 13-18 March 1919 [Nos. 4549, 4631, 4680].

♂. Koh Lak, S. W. Siam, 8 April 1919 [No. 5155].

2 ♀, 2 ♀. Hat Sanuk, S. W. Siam, 12-18 April 1919 Nos. 5345, 5312, 5346, 5381].

"Iris brown or reddish; bill slate, culmen black; feet fleshy."

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Total length ♂, 159, 139, 147, 153, 155, 153, 158, 157, 155, 155, 157, 162, 158, 153; ♀, 148, 148, 145, 148, 150, 152, 153, 146, 145, 152, 143; wing ♂, 76, 73, 76, 70, 71, 74, 76, 74, 72, 76, 78, 76, 77, 71; ♀, 72, 71, 71, 72, —, 70, 73, 72, 67, 72, 70; tail ♂, 57, 48, 58, 45, 50, 55, 57, 57, 53, 55, 55, 54, 55, 48; ♀, 48, 52, 52, 53, —, 50, 52, 53, 50, 48, 48; tarsus ♂, 26, 26, 26, 28, 27, 27, 26, 26, 27, 27, 27, 27, 25.5, 26; ♀, 26.5, 25, 25, 26, 27, —, 28, 27, 25, 26, 26, 24; bill from gape ♂, 24, 21, 22, 23, 24, 23, 24, 22, 24.5, 22, 24.5, 23, 21.5, 23; ♀, 22, 22, 22, 22, 22, 22, 23, 22, 22, 23, 22 mm.

400. *Malacocincla sepiaria tardinata* Hartert.

Malacocincla sepiaria tardinata, Hartert, Bull. Brit. Orn. Club xxxvi (1916), p. 35 (Gunong Tahan, Kelantan-Pahang boundary); Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 59 (Bangnara, Patani).

This essentially Malaysian bird does not apparently extend north beyond Patani. In the Malay States it occurs side by side with *M. abbotti*; but the two, though having a general resemblance to each other, are quite distinct species.

401. *Turdinus macrodactylus macrodactylus* (Strickl.).

Malacopteron macrodactylum, Strickl. Ann. & Mag. Nat. Hist. xiii, 1844, p. 417 (Malacca).

Turdinus macrodactylus, B., p. 18 (Junk Seylon); F., p. 60 (Trang); L., p. 110 (Ghirbi); M., p. 187 (Tung Song, P. Siam).

A careful examination of six specimens from Trang and Ghirbi, compared with twenty from the Federated Malay States, including several from the vicinity of the type locality, reveals no differences either in size or colouration between northern and southern birds, except possibly a more clear differentiation of the white gorget in the latter. The browner, less rufous tint noted by Stuart Baker is a characteristic of recent skins or freshly moulted birds, and is well shown in our large series.

402. *Erythrocichla bicolor bicolor* (Less.).

Brachypteryx bicolor, Lesson, Rev. Zool., 1839, p. 138 (Sumatra).

Malacopteron ferruginosum, A., p. 273 (Pakchan, Malewoun).

Trichostoma ferruginosum, C. i, p. 58 (South Tenasserim).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller Die Ornis der Insel Salunga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Erythrocichla bicolor F., p. 60 (Trang); M. 2, p. 259 (Tenasserim; Malay Peninsula).

4 ♂, 2 ♀. Tasan, Chumporn, P. Siam, 18-24 March 1919 [Nos. 4664, 4756-7, 4778, 4822-3].

"Iris red sienna or light brown; upper mandible dark horn, lower grey; feet brownish flesh."

Total length ♂, 174, 174, 175, 170; ♀, 155, 161; wing ♂, 86, 85, 80, 85; ♀, 77, 77; tail ♂, 77, 75, —, 73; ♀, 68, 65; tarsus ♂, 29.5, 29, 30, 31; ♀, 28, 30; bill from gape ♂, 23, 24, 23.5, 25, ♀, 24, 23 mm.

A bird of the evergreen forests.

Hartert (Bull. Brit. Orn. Club. xxxvi, p. 36) has separated the Bornean bird as having a duller forehead. We have only two examples from Borneo and they confirm his diagnosis, but they can also be matched, or nearly so, by birds from the Malay Peninsula.

403 *Drymocataphus tickelli tickelli* (Blyth).

Pellorneum tickelli, Blyth, Journ. Asiat. Soc. Bengal, xxviii, 1859, p. 414 (Amherst, Tenasserim).

Trichastoma minor, A., p. 259 (Nwalabo to Laynah).

Drymocataphus tickelli, C. i, p. 64 (S. Tenasserim).

Pellorneum tickelli tickelli, M. 2, p. 247 (Tenasserim; Siam; Malay Peninsula).

♂. Renong River, P. Siam, 21 Feb. 1919 [No. 4147].

2 ♂, 1 ♀. Tapli, Pakchan, P. Siam, 4-9 March 1919 Nos. 4422, 4455, 4519].

♂, ♀. Tasan, Chumporn, P. Siam, 24-28 March 1919 [Nos. 4839, 4905].

"Iris sienna; bill corneous, paler beneath; feet whitish flesh".

Total length ♂, 143; ♀, 144, 136, 145; wing ♂, 61; ♀, 62, 58, 60; tail ♂, 58; ♀, 53, 53, 51; tarsus ♂, 28.5; ♀, 27, 27, 25; bill from gape ♂, 20; ♀, 18, 19, 19 mm.

404. *Drymocataphus tickelli australis* Robinson and Kloss.

Drymocataphus tickelli australis Rob. and Kloss, Journ. Fed. Malay States Mus. x, 1921, p. 305 (Selangor: paratypes from Trang and Bandon).

Drymocataphus tickelli, F., p. 60 (Trang); H., p. 140 (Bandon).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

In February-April 1922 we obtained further specimens on Khao Ram, 1,000 ft., and Khao Luang, 2,000 ft., in Nakorn Sri-tamarat. This is a more richly coloured race than the typical form.

405. *Drymocapthus capistratus nigricapitatus* (Eyton).

Brachypteryx nigricapitata, Eyton, P. Z. S. 1839, p. 103 (Malacca).

Drymocapthus nigricapitatus, A., p. 275 (Bankasoon, Malewoon); C. i, p. 63 (South Tenasserim); F., p. 60 (Trang); H., p. 104 (Bandon); M., p. 185 (Tung Song).

Pellorneum nigricapitatum, M. 2, p. 246 (Tenasserim; S. W. Siam; Malay Peninsula).

7 ♂, 2 ♀. Tasan, Chumporn, P. Siam 15-26 March 1919 [Nos. 4615, 4617, 4621, 4649, 4721, 4760, 4824-5, 4866].

"Iris red; upper mandible black, lower slate; feet purplish brown".

Total length ♂, 160, 167, 171, 170, 170, 170, 161,; ♀, 162, 170: wing ♂, 68, 70, 58, 70, 72, 68, 65; ♀, 67, 72; tail ♂, 62, 64, 63, 65, 64, 58, 58; ♀, 54, 65; tarsus ♂, 29.5, 28, 30, 31, 29, 32, 30; ♀, 31, 31: bill from gape ♂, 24, 22, 21.5, 21, 24, 24, 23; ♀, 22, 23 mm.

Found only in evergreen forest, usually amongst dense undergrowth: here attaining its northern limit.

406. *Aethostoma rostratum rostratum* (Blyth).

Trichastoma rostratum, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 795 (Singapore).

Trichastoma rostratum, C. i, p. 56 (Malewoon).

Aethostoma rostrata, M. 2, p. 259 (S. Tenasserim; Malay Peninsula).

2 ♂, Tasan, Chumporn, P. Siam, 20-23 March 1919 [Nos. 4722, 4812].

"Iris sienna; upper mandible dark horn, lower slate, tomia and gape yellow; feet pale flesh".

Total length 154, 155; wing 67, 68; tail 53, 53; tarsus 25, 27; bill from gape 23, 23, mm.

This rare ground-babbler has not hitherto been recorded from the kingdom of Siam.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

407. *Horizillas magna* (Eyton).

Malacopteron magnum, Eyton, P. Z. S. 1839, p. 103 (Malacca);
C. i, p. 55 (S. Tenasserim).

Malacopteron magnum, A., p. 270 (Pakchan).

Setaria magna magna, Williamson, Journ. N. H. Soc. Siam, iii,
1918, p. 17 (Bangnara, Patani).

Horizillas magna magna, M. 2, p. 257 (Tenasserim; Siam; N.
Malay Peninsula).

♂, Tasan, Chumporn, P. Siam, 20 March 1919 [No. 4727].

"Iris red; bill slate dark on culmen; feet pale slate".

Total length 193; wing 88; tail 78; tarsus 26; bill from
gape 23 mm.

A typically Malayan bird, here attaining its maximum nor-
thern extension; only one form is known.

408. *Horizillas cinerea cinerea* (Eyton).

Malacopteron cinereum, Eyton, P. Z. S., 1839, p. 103 (Malacca).

Setaria magna cinerea, Williamson, Journ. N. H. Soc. Siam, iii,
1918, p. 17 (Bangnara, Patani).

Just crossing the southern Siamese frontier.

409. *Horizillas magnirostris magnirostris* (Moore).

Alcippe magnirostris, Moore, P. Z. S. 1854, p. 277 (Malacca).

Malacopteron magnirostris, A., p. 274 (Bankasoon, Malewoon).

Malacopteron magnirostre, C. i, p. 56 (S. Tenasserim and Malay
Peninsula); E., p. 83 (Patani).

Setaria magnirostris, F., p. 60 (P. Siam).

Turdinus magnirostris, H., p. 103 (Bandon); L., p. 110 (Junk
Seylon).

Horizillas magnirostre, M. 2, p. 258 (S. Tenasserim; Malay Pen-
insula).

♂. Tung Pran, Takuatung, P. Siam, 11 Feb. 1919 [No. 3977].

4 ♂, 2 ♀, Tasan, Chumporn, P. Siam, 16-28 March 1919
[Nos. 4635-6, 4673, 4737, 4753, 4912].

"Iris red; bill slate, culmen darker, gape yellowish; feet
lavender".

Total length ♂, 165, 172, 172, 170; ♀, 158, 174; wing ♂,
79, 83, 79, 79; ♀, 70, 85; tail ♂, 74, 74, 78, 75; ♀, 65, 80; tarsus

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♂, 22, 24, 23.5, 23; ♀, 23, 23; bill from gape ♂, 22, 21, 22, 21; ♀, 20, 20 mm.

410. *Horizillas affinis* (Blyth).

Trichastoma affine, Blyth, Journ. Asiat. Soc. Bengal xi, 1842 p. 795. (Singapore).

Malacopteryx melanocephalum, Davison, Ibis, 1892, p. 101 (Pahang, Malay States).

Mr. Williamson has a male from Bangnara, Patani (29th July 1916): we know of no other material from Siam A Malaysian species.

411. *Anuropsis malaccensis malaccensis* (Hartl.).

Brachypteryx malaccensis, Hartlaub, Rev. Zool. 1844, p. 402 (Malacca).

Anuropsis malaccensis, F., p. 60 (Trang); M., p. 187 (Tung Song); Gyldenstolpe, Ibis, 1920, p. 484 (Mata Mansau,* P. Siam).

This common Peninsular bird reaches its northern limit at Tung Song.

412. *Turdinulus epilepidotus granti* Richm.

Turdinulus granti, Richmond, Proc. U. S. Nat. Mus. 1900, p. 320 (Khao Sai Dao, Trang); F., p. 61 (Trang).

Turdinulus epilepidotus granti, M., p. 190 (Tung Song).

Turdinulus epilepidotus davisoni, M. 2, p. 255 (partim: N. Malay States).

We have not met with this ground babbler elsewhere than in Trang and the mountains of Nakorn Sritamarat where it is fairly common.

413. *Corythocichla brevicaudata leucosticta* Sharpe.

Corythocichla leucosticta, Sharpe, P. Z. S. 1887, p. 438 (Larut Hills, Perak); F., p. 61 (Trang); H., p. 104 (Bandon).

Corythocichla brevicaudata herberti, Baker. Bull. Brit. Orn. Club. xxxviii, 1917, p. 10 (Tung Song).

Corythocichla brevicaudata leucosticta, Robinson and Kloss, Ibis, 1918, p. 585 (Tung Song); Baker, Ibis, 1918, p. 593; M., p. 184.

Specimens from Khao Nawng, Bandon, are (as noted previously) not to be separated from a typical series of the southern

*We know of no such locality in Siam. Eds.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Borneo, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

bird from Perak. We have this bird also from Ronpibun, Nakorn Sritamarat.

414. *Alcippe poiocephala davisoni* Harington.

Alcippe phaeocephala daviseni, Harington, Journ. Bombay. N. H. Soc. xxiii, 1915, p. 453 (Tavoy; Mergui and to the south).

Alcippe phayrii, A., p. 260 (Nwalabo to Malewoon); F., p. 61 (Trang); H., p. 105 (Bandon).

Alcippe phaeocephala magnirostris, M., p. 188 (Tung Song and Patiyu).

Alcippe poiocephala davisoni, M. 2, p. 279 (Tavoy; Mergui).

2 ♂. Renong River, P. Siam, 22 Feb. 1919 [Nos. 4161, 4162].

♂. Victoria Point, S. Tenasserim, 24 Feb. 1919 [No. 4180].

♂, Mamoh, Pakchan, P. Siam, 27 Feb. 1919. [No. 4288].

9 ♂, 5 ♀. Tapli, Pakchan, P. Siam, 1-9 March 1919 [Nos. 4334-5, 4370, 4384-7, 4410, 4435, 4454, 4483, 4494, 4500, 4529].

3 ♀, Tasan, Chumporn, P. Siam, 14-23 March 1919 [Nos. 4572, 4697, 4802].

2 ♂, 2 ♀. Hat Sanuk, near Koh Lak, S. W. Siam, 14-19 April 1919 [Nos. 3295, 5334, 5374, 5400].

Total length ♂, 163, 163, 158, 161, 166, 163, 156, 160, 162, 161, 158, 151, 159, 158, 159; ♀, 163, 156, 154, 163, 155, 151, 160, 158, 158, 158; wing ♂, 70, 71, 68, 71, 71, 73, 70, 73, 72, 70, 73, 69, 67, 71, 71; ♀, 70, 67, 69, 72, 70, 70, 67, 66, 67, 67; tail ♂, 72, 73, 72, 72, 73, 74, 72, 75, 74, 73, 73, 73, 68, 69, 73; ♀, 72, 69, 66, 73, 68, 72, 70, 70, 73, 70; tarsus ♂, 24, 24, 23, 23, 22, 23, 22, 23, 23, 23, 23, 23, 19.5, 23, 21; ♀, 22, 20, 21.5, 23, 22, 22, 22, 22, 22, 21; bill from gape ♂, 18, 19, 18, 20, 19, 18.5, 18, 19, 19, 17, 19, 18, 18, 18, 18; ♀, 19.5, 18, 18, 18, 19, 17, 16, 19, 18, 18 mm.

Baker (M., p. 188) states that his small series from a very limited area have very noticeable variation in the extent of the markings on the head and hind-neck. On the other hand, the considerable number listed above, with many others from Bandon, Nakorn Sritamarat and Trang collected over a wide area, are very constant, markings, as Harington stated, being practically absent.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

***Alcippe nipalensis fratercula* Rippon.**

Alcippe fratercula, Rippon, Bull. Brit. Orn. Club, xi, 1900, p. 11 (Hills of S. Shan States, above 4,000 feet); id., Ibis, 1901, p. 530.

Alcippe nipalensis A., p. 513 (Nwalabo); C. i, p. 68 (Nwalabo).

Alcippe nipalensis fratercula, Harington, Journ. Bombay N. H. Soc. xxiii, 1915, p. 448 (Hills of Tenasserim); M. 2, p. 277 (Tenasserim).

There is at present no direct evidence that any Nun-thrush of this group occurs in the present area, though the above race will probably ultimately be discovered there. The Malayan form, *A. n. peracensis*, has not been found north of the Perak Hills.

415. *Alcippe cinerea cinerea* Blyth.

Alcippe cinerea, Blyth, Journ. Asiat. Soc. Bengal xiii, 1844, p. 384 (Singapore); E., p. 82 (Patani); F., p. 61 (Trang); H., p. 105 (Bandon).

No further specimens of this essentially Malaysian form have been reported from Siamese territory except two from Khao Ram, Nakorn Sritamarat, in March 1922, by Mr. Williamson's collector.

416. *Stachyris nigriceps davisoni* Sharpe.

Stachyris davisoni, Sharpe, Bull. Brit. Orn. Club, i, 1892, p. vii (Pahang); F., p. 61 (Trang); H., p. 105 (Bandon).

Stachyris nigriceps, A., p. 264 (Nwalabo and Tenasserim town); C. i, p. 48 (S. Tenasserim).

Stachyris nigriceps davisoni, M., p. 158 (Tung Song); M. 2, p. 265 (S. Tenasserim, P. Siam).

♂. Tapli, Pakchan, P. Siam, 10 March 1919 [No. 4504].

3 ♂, ♀. Tasan, Chumporn, P. Siam, 15-24 March 1919 [Nos. 4607, 4765-6, 4828].

"Iris reddish, yellow or pale hazel; upper mandible black, lower slate; feet pale greenish slate."

Total length ♂, 133, 137, 140, 138; ♀, 125; wing ♂, 58, 61, 57, 60; ♀, 55; tail ♂, 48, 53, 52, 54; ♀, 48; tarsus ♂, 21, 21, 22, 23; ♀, 20; bill from gape ♂, 19.5, 18, 19, 20; ♀, 18 mm.

This series is indistinguishable from topotypes from the Tahan River, Pahang.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

417. *Stachyris nigricollis* (Temm.).

Timalia nigricollis, Temm., Pl. Col. 594, fig. 2, 1836 (Borneo).

Stachyris nigricollis, F., p. 62 (Trang.); Williamson, Journ. N. H.

Soc. Siam, iii, 1918, p. 17 (Bangnara, Patani).

Rare in Trang, beyond which state it does not extend northwards.

418. *Stachyris poliocephala diluta* Rob. & Kloss.

Stachyris poliocephala diluta, Robinson & Kloss, Ibis, 1912 p. 587 (Taiping, Perak).

Stachyris poliocephala, F., p. 62 (Trang); M., p. 188 (Tung Song).

Distribution as in the preceding species.

419. *Stachyridopsis rufifrons obscura* Baker.

Stachyridopsis rufifrons obscura, Baker, Bull. Brit. Orn. Club, xxxiii, 1917, p. 10 (Patiyu); M., p. 188 (Patiyu); M. 2, p. 270, footnote (S. W. Siam).

Stachyris rufifrons, A., p. 265 (Mergui, Bahonee).

Stachyridopsis rufifrons, C. i, p. 54 (Tenasserim).

Stachyridopsis rufifrons poliogaster, Robinson & Kloss, Ibis, 1918, p. 587 (Patiyu).

3 ♂, ♀. Tasan, Chumporn, P. Siam, 13-22 March 1919 [Nos. 4553, 4677, 4703, 4782].

"Iris red or brown; bill dark horn, lower mandible pinkish horn; feet brownish yellow."

Total length ♂, 119, 123, 125; ♀, 116; wing ♂, 48, 50, 54; ♀, 51; tail ♂, 51, 48, 50; ♀, 48; tarsus ♂, 18, 19, 18; ♀, 18; bill from gape ♂, 14, 14, 15.5; ♀, 15 mm.

We must freely admit that we were wrong in identifying this race with *St. r. poliogaster*, of which we now possess specimens from various parts of the Malay Peninsula, Sumatra and Borneo.

Mr. Baker's subspecies is quite distinct, and may be recognized by its paler forehead and crown and by the more fulvous sides of the head.

420. *Stachyridopsis chrysaea chrysops* (Richm.).

Stachyris chrysops, Richmond, Proc. Biol. Soc. Wash. xv, 1902, p. 157 (Trang).

Stachyris assimilis, A., p. 514 (Nwalabo); C. i, p. 53 (Nwalabo).

Stachyridopsis chrysops, H., p. 104 (Bandon).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Stachyris chrysaea chrysops, M. 2, p. 267 (Tenasserim; Malay Peninsula).

Specimens of the Stripe-headed Golden Babbler are most unsatisfactory to discriminate as they fade with great rapidity and the various races then tend to approximate in appearance. Quite recent skins of the present form and *St. c. bocagei* are now very similar in appearance though in life they are quite different: the latter being a much duller bird.

421. *Thringorhina striolata guttata* (Tick.).

Turdinus guttatus, Tickell, Blyth, Journ. Asiat. Soc. Bengal xxviii, 1859, p. 414 (Muleyit); A., p. 264 (Malewoon).

Stachyris guttata, C, i, p. 49 (Malewoon).

Thringorhina guttata, H., p. 106 (Bandon); M., p. 187 (Maprit and Tung Song); M. 2, p. 262 (Tenasserim; P. Siam).

♀. Tapli, Pakchan, P. Siam, 2 March 1919 [No. 4367].

2 ♂. Tasan, Chumporn, P. Siam, 17-18 March 1919 Nos. 4665-6).

"Iris red; bill slate, culmen black; feet greenish olive."

Total length ♂, 155, 162; ♀, 165; wing ♂, 66, 72; ♀, 67; tail ♂, 58, 60; ♀, 56; tarsus ♂, 22, 23; ♀, 23; bill from gape ♂, 21.5 20.5; ♀, 20 mm.

We have specimens from the Nakorn Sritamarat Hills.

An inhabitant of the evergreen jungles. This bird is merely a subspecies of the Sumatran *T. striolata* (Muell.), from which it differs in its less saturate tints.

422. *Kenopia striata* (Blyth).

Timalia striata, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 793 (Singapore or Malay Peninsula).

Kenopia striata, F., p. 62 (Trang); Kloss, Journ. F. M. S. Mus. iv, 1911, p. 232 (Trang).

Rare everywhere and generally affecting lowland swamp country.

423. *Cyanoderma erythroptera erythroptera* (Blyth).

Timalia erythroptera, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 794 (Singapore).

Cyanoderma erythroptera, A., p. 269 (Tenasserim town to Malewoon).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhot, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Napodes erythroptera, B., p. 19 (Junk Seylon).

Micornis erythroptera, C. i, p. 51 (S. Tenasserim).

Cyanoderma erythropteron, F., p. 62 (Trang); H., p. 106 (Bandon); L., p. 110 (Junk Seylon); Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 855 (S. Tenasserim).

Cyanoderma erythropteron sordida, Baker, Bull. Brit. Orn. Club, xxxviii, 1917, p. 10 (Patiyu); id., Ibis, 1918, p. 594 (Patiyu); M., p. 189 (Klong Wang Hip; Tung Song).

Cyanoderma erythropteron erythropteron, Robinson & Kloss, Ibis, 1918, p. 590 (Bandon; Junk Seylon; Trang, etc.).

Cyanoderma erythroptera erythroptera, M. 2, p. 271 (S. Tenasserim; Malay Peninsula).

♂; ♀. Tung Pran, Takuatung, S. W. Siam, 13-14 February 1919 [Nos. 3970, 3996].

2 ♂. Mamoh, Pakchan, P. Siam, 28 Feb. 1919 [Nos. 4319-20].

2 ♂, ♀. Tapli, Pakchan, P. Siam, 1-4 March 1919 [Nos. 4333, 4413-4].

5 ♂, 2 ♀. Tasan, Chumporn, P. Siam, 13-24 March 1919 [Nos. 4547, 4626, 4713, 4776, 4826-7, 4832].

"Iris red, orbits smalt; sides of neck, silvery cobalt; bill plumbeous, culmen black, feet yellowish grey".

Total length ♂, 134, 140, 136, 133, 148, 140, 133, 140, 132, 128; ♀, 137, 138, 133, 128; wing ♂, 58, 59, 59, 60, 61, 52, 60, 58, 61, 58; ♀, 61, 56, 58, 58; tail ♂, 58, 54, 53, 54, 57, 57, 56, 54, 53, 53; ♀, 54, 55, 53, 50; tarsus ♂, 21, 22, 21, 21, 22, 21.5, 20, 21, 21, 21; ♀, 23.5, 22, 19.5, 20.5; bill from gape ♂, 17, 18, 19, 16, 18, 28, 18, 19, 17, 18; ♀, 18, 18, 18.5, 17 mm.

Specimens from the north should have been compared with Malaccan birds before an attempt at separation was made, as the latter were named by Hartlaub *Timalia pyrrhophaca*.

If they are distinct from *C. e. erythropteron* (and we have not sufficiently good material from Singapore to say), the latter is confined to the island and the extreme south of Johore, and all the

Please note that the references to **M.** as given below should be used from page 259 onwards. Eds.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,

iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part.)

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

rest of the Peninsular birds must be called *C. e. pyrrhophæa* (Hartl., Rev. Zool. 1844, p. 402: Malacca and Sumatra).

We are rather at a loss to understand what Mr. Baker takes *C. e. erythroptera* to be exactly; because in Ibis, 1918, p. 594, he tells us that "specimens of Java and Sumatra seem to be one and the same" and *C. erythroptera* is not known from Java.

424. *Mixornis rubricapilla pileata* (Blyth).

Prinia pileata, Blyth, Journ. Asiat. Soc. Bengal. xi, 1842, p. 204 (Malacca).

Mixornis gularis, D., p. 64 (Patani); E., p. 81 (Patani).

Mixornis rubricapilla pileata, M. 2, p. 274 (partim: South Malay Peninsula).

This Malayan form extends northwards into Patani where, however, birds also occur showing a decided approach to *M. r. connectens*: but references to Patani specimens seem best placed here. This race has much darker, more rufous, upper parts, wings and tail; and more heavily striped throat and breast than the next.

425. *Mixornis rubricapilla connectens* Kloss.

Mixornis rubricapilla connectens, Kloss, Ibis, 1918, p. 207 (P. Siam, Lat. 10° N.); L., p. 110 (Ghirbi and Junk Seylon).

Mixornis gularis, A., p. 266 (Mergui to Malewoon); B., p. 18 (Junk Seylon or mainland); C. i, p. 51 (Mergui southwards); F., p. 62 (Trang & Langkawi); H., p. 106 (Bandon); I., p. 60 (Koh Lak); Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 855 (S. Tenasserim).

Mixornis rubricapillus, Williamson, Journ. N. H. Soc. Siam, i, 1914, p. 77 (Bangkok; Koh Lak); G., p. 148 (Ratburi or Pet-chaburi); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 437 (Malewoon).

Mixornis gularis rubricapillus, H., p. 149 (Koh Pennan & Koh Samui).

Mixornis rubricapilla rubricapilla or subsp. nov., J., p. 176 (Langkawi, Terutau and Telibon Islands).

Mixornis sumatrana rubricapilla, M., p. 189 (partim: Tung Song, Maprit and neighbourhoods).

Mixornis rubricapilla minor, M. 2, p. 274 (partim: near Bangkok).

Mixornis rubricapilla pileata, M. 2, p. 274 (partim: S. Tenasserim).

♂. Pangnga River, P. Siam, 11 Feb. 1919 [No. 3955].

2 ♂, 2 ♀. Tung Pran, Takuapa, P. Siam, 13-14 Feb. 1919 [Nos. 3971, 3994, 4006-7].

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂, ♀. Renong River, P. Siam, 21 Feb. 1919 [Nos. 4141-2].

4 ♂, ♀. Victoria Point, S. Tenasserim, 24 Feb. 1919 [Nos. 4169, 4170, 1, 3, 4].

2 ♂, ♀. Tapli, Pakchan, P. Siam, 4-6 March 1919 [Nos. 4417, 4434, 4453].

2 ♂, 2 ♀. Tasan, Chumporn, P. Siam, 17-24 March 1919 [Nos. 4647, 4818-9, 4829].

2 ♂, 2 ♀. Koh Lak, P. Siam, 1-9 April 1919 [Nos. 4892, 5031, 5097, 5190].

5 ♂, 3 ♀. Hat Sanuk, P. Siam, 12-14 April 1919 [Nos. 5247-8, 5258, 5265, 5279, 5280, 5293-4].

Total length ♂, 142, 133, 138, 133, 135, 138, 130, 133, 135, 138, 136, 125, 122, 132, 133, 133, 130, 136, 132; ♀, 133, 134, 135, 128, 131, 130, 128, 128, 123, 128, 133, 127; wing ♂, 60, 56, 61, 58, 57, 57, 56, 58, 59, 58, 56, 52, 55, 58, 56, 58, 57; ♀, 58, 56, 58, 58, 58, 57, 56, 57, 53, 54, 58, 56; tail ♂, 58, 58, 58, 55, 54, 61, 54, 55, 53, 52, 53, 53, 55, 57, 55, 55, 58, 53; ♀, 55, 52, 57, 53, 50, 52, 53, 53, 52, 53, 54, 53; tarsus ♂, 19, 18, 19, 18, 19.5, 21, 19, 18, 18, 19, 19, 17.5, 18, 19, 18, 18, 19, 17.5, 17.5; ♀, 16.5, 18, 18, 19, 20, 18, 19, 17, 16, 16.5, 17, 16.5; bill from gape ♂, 17, 17.5, 18, 18, 18, 18, 17, 18, 18, 19, 19, 17.5, 18, 19, 18, 18, 19, 17.5, 17.5; ♀, 17, 17.5, 18, 17.5, 17.5, 17, 17, 16, 16, 18, 16.5, 16 mm.

Specimens from Pangnga to Chumporn are typical *connectens*; but two or three from Koh Lak and Hat Sanuk show, in more lightly striped foreparts, a first approach to *rubricapilla* and the North and East Siamese race. The present subspecies has been obtained in S. E. Siam, W. Cambodia, S. Annam and in Cochin-China. In Pulo Condore occurs another race, *M. c. condorensis* Robinson (Journ. N. H. S. Siam, iv., 1920, p. 88) differing in a darker red-brown crown, and more olivaceous upper parts.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part.)

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

426. *Macronus ptilosus ptilosus* Jard. & Selb.

Macronus ptilosus, Jardine & Selby, Ill. Orn. 1835, pl. 150 (Malacca); Williamson, Journ. N. H. Soc. Siam. iii, 1918, p. 17 (Bangnara, Patani).

A purely Malaysian species.

427. *Myiophoneus eugenei eugenei* Hume.

Myiophoneus eugenei, Hume, Stray Feathers, i, 1873, p. 475 (Thayetmyo, Pegu); L., p. 62 (Koh Lak); K., p. 207 (Koh Lak).

428. *Myiophoneus eugenei crassirostris* Rob.

Myiophoneus crassirostris, Robinson, Bull. Brit. Orn. Club. xxv, 1910, p. 99 (Trang); F., p. 62 (Trang; Langkawi; Terutau).

Myiophoneus eugenei crassirostris, J., p. 178 (Terutau; Pulo Muntia; Pulo Lontar); L., p. 110 (Ghirbi).

429. *Heteroxenicus leucophris leucophris* (Temm.).

Myiosthera leucophris, Temm. Pl. Col. 1827, No. 448, fig. 1 (Java). *Brachypteryx urayi*, H., p. 106 (Khao Nawng, Bandon).

Only found as yet on Khao Nawng and Khao Luang, Nakon Sritamarat, P. Siam, at between 3,000 and 4,000 feet.

After examination of topotypes from Java and a large series from Sumatra we are forced to the conclusion that the Siamese birds are identical with the Javanese, and differ from those of Sikhim and the mountains of the Federated Malay States (*H. l. nipalensis* and *H. l. urayi*) in that the males are never slaty. Davison (Stray Feathers, vi, 1878, p. 236: Muleyit) and Oates have already commented on this curious fact (Fauna Brit. Ind. Birds, i, p. 189).

430. *Siva cyanuroptera sordidior* Sharpe.

Siva sordidior, Sharpe, P. Z. S. 1888, p. 276 (Batang Padang Mts., Perak); H., p. 106 (Bandon).

The exact identification of this form as occurring in Peninsular Siam is a matter of some doubt, as the five specimens from Khao Nawng, Bandon, and others recently obtained on Khao Luang, 5,500 feet, Nakorn Sritamarat, on which the occurrence rests, are all in very worn and faded plumage. The subspecies is, in any event, not very strongly differentiated from *S. c. sordida* Hume, from Muleyit in Tenasserim.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

431. *Herpornis xantholeuca interposita* Hartert.

Herpornis xantholeuca interposita, Hartert, Bull. Brit. Orn. Club xxxviii, 1917, p. 20 (Upper Perak; Perlis; Tenasserim).

Herpornis xantholeuca, A., p. 374 (Tavoy to Bankasoon); C. i, p. 151 (Tenasserim and Tongka); E., p. 80 (Patani); F., p. 63 (Langkawi); H., p. 107 (Khao Nawng, Bandon); I., p. 62 (Koh Lak); M., p. 190 (Tung Song).

Erpornis xantholeuca xantholeuca, M. 2, p. 325 (partim: S. Tenasserim; Siam; N. Malay Peninsula).

♀. Renong River, P. Siam, 21 Feb. 1919 [No. 4143.]

♂ 3, ♀. Tasan, Chumporn, P. Siam, 17-19 March 1919 [Nos. 4654, 4660, 4693-4].

3 ♂, 4 ♀. Hat Sanuk, S. W. Siam, 14-17 April, 1919 [Nos. 5283, 5305-7, 5335, 5363-4].

"Iris dark brown, grey or whitish; bill horny, darker on culmen, yellowish at gape; feet yellowish pink."

Total length ♂, 127, 115, 122, 118; ♀, 127, 120, 122, 120, 120, 118, 115, 122; wing ♂, 70, 60, 68, 61; ♀, 68, 65, 65, 62, 65, 65, 62, 66; tail ♂, 53, 47, 48, 47; ♀, 50, 48, 49, 46, 49, 50, 47, 48; tarsus ♂, 18, 18, 17, 18; ♀, 16, 18, 17, 18, 17.5, 17, 17, 18; bill from gape ♂, 16, 16, 15.5, 16; ♀, 16, 16.5, 16, 16, 14, 16, 15.5, 16 mm.

We have examples also from Khao Luang, 2,000-3,000 feet, Nakorn Sritamarat, P. Siam.

432. *Pteruthius flaviscapis aeralatus* Tickell.

Pteruthius aeralatus, Tickell, Journ. Asiat. Soc. Bengal. xxiv, 1855, p. 267 (Tenasserim); H., p. 107 (Khao Nawng, Bandon).

Pteruthius aeralatus aeralatus, M. 2, p. 333 (Tenasserim, North Malay Peninsula).

The Khao Nawng birds and specimens from Khao Luang, 4,500-5,800 ft. Nakorn Sritamarat, P. Siam, agree well with others from Khoon Tan in the North of Siam. Birds from the Perak and Selangor Hills are not quite typical, and some specimens show an approach to the Sumatran form *P. f. cameranoi* Salvad.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, *Ibis*, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, *op. cit.*, iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

433. *Mesia argenteauris argenteauris* Hodgs.

Mesia argenteauris, Hodgson, Ind. Rev. 1838, p. 88 (Nepal); H., p. 107 (Khao Nawng, Bandon).

Mesia argenteauris argenteauris, M. 2, p. 354 (Siam).

Apparently quite typical: besides the Bandon examples we have seen many from Khao Luang 3,000–5,800 feet, Nakorn Sritamarat.

TROGLODYTIDAE.

WRENS.

434. *Pnoepyga pusilla* > *pusilla* Harterti.

Pnoepyga pusilla, Hodgson, P. Z. S. 1845, p. 25 (Nepal).

Pnoepyga pusilla harterti, Robinson & Kloss, Journ. F. M. S. Mus. viii, part 2, 1918, p. 205 (Larut Hills, Perak).

Pnoepyga pusilla, H., p. 107 (Khao Nawng, Bandon).

The only examples known from our area are a pair from the mountains of Bandon at 4,000 ft. They are exactly referable to neither the northern nor southern race and we must leave them in an intermediate position until we have more material.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901. Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

TURDIDAE.

THRUSHES AND CHATS.

1	{ Wing more than 3.5 inches	2
	{ Wing less than 3.5 inches	15
2	{ Rump broadly white	3
	{ No white on rump	5
3	{ Abdomen rufous	<i>Kittacincla malabarica</i> , subsp.
	{ Abdomen white	4
	{ Breast entirely black; crown white	<i>Hevicurus frontalis</i>
4	{ Breast white, barred black: crown chestnut	<i>H. ruficapillus</i>
	{ Breast entirely white; crown slaty	<i>H. schistaceus</i>
5	{ Crown and nape contrasting with back	6
	{ Crown and nape not distinct from back	8
6	{ Crown and nape blue	<i>Monticola gularis</i> , ♂
	{ Crown and nape rufous or chestnut	7
7	{ Foreneck black, different from breast	<i>Geocichla interpres</i>
	{ Foreneck rufous like breast	<i>G. citrina</i> , subsp.
8	{ Wing over 5.5 inches	9
	{ Wing about 5 inches or less	10
9	{ Tail-feathers twelve	<i>Oreocincla dauma</i>
	{ Tail-feathers fourteen	<i>O. aurea horsfieldi</i>
10	{ With several white tail-feathers	<i>Copsychus saularis</i> , subsp.
	{ With no white tail-feathers	11
	{ Axillaries and under wing-coverts of one colour	12
11	{ Axillaries and under wing-coverts of two colours	13
	{ Under tail-coverts white	<i>Turdus o. obscurus</i>
12	{ Under tail-coverts chestnut	<i>Monticola solitaria philippensis</i> , ♂
	{ Under tail-coverts blue	<i>M. s. pandoo</i> , ♂
13	{ A long pale eyebrow	<i>Cichloselys sibirica davisoni</i>
	{ No supraorbital stripe	14
	{ Upper parts greyish blue or blue, abdomen barred	<i>M. solitaria</i> subsp. ♀
14	{ Upper parts greyish brown or olive brown	<i>M. gularis</i> , ♀
	{ Abdomen white	
15	{ Basal half of tail chestnut	<i>Cyanosylvia suecica</i>
	{ Tail of one colour throughout	16
16	{ With red on the throat	<i>Calliope calliope</i>
	{ No red on the throat	17
17	{ Upper tail-coverts blue or russet	<i>Larvivora c. cyane</i>
	{ Upper tail-coverts white or pale rufous	<i>Saxicola torquata</i> , subsp.

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
 J. Robinson, Journ. F. M. S. Mus. vii, 1917.
 K. Kloss, Ibis, 1918.
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

- M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
 (first and second parts).
 M. 1. Baker, op. cit., iv, 1920 (third part.)
 M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

435. *Geocichla interpres* (Kuhl.).

Turdus interpres, Kuhl., Temminck, Pl. Col. 1828, pl. 458 (Java).
Turdus avensis, Gray, Griffith's edn. Cuvier, vi, 1829, p. 530, pl. (Burma).

Geocichla interpres, Richmond, Proc. U. S. Nat. Mus., xxii, 1900, p. 319 (Trang).

♂. Tasan, Chumporn, P. Siam, 14 March 1919 [No. 4577].

"Iris dark, hazel; bill black, greenish at base; feet whitish flesh."

Total length 183; wing 108; tail 63; tarsus 29; bill from gape 23.5 mm.

This widely-spread thrush, of which we have specimens from Java, Sumatra, Borneo and Tampin, near Malacca, is singularly constant throughout its range.

436. *Geocichla citrina citrina* (Lath.).

Turdus citrinus, Latham, Ind. Orn. i, 1790, p. 350 (India).

Geocichla citrina, A., pp. 250, 512 (partim: Tavoy to Malewoon); C., i, p. 3 (Tenasserim); F., p. 63 (Trang); G., p. 149 (Ratburi or Petchaburi); I., p. 46 (Koh Lak).

Geocichla citrina citrina, J., p. 179 (Langkawi & Lontar Is.); L., p. 110 (Ghirbi; Junk Seylon; Pulo Panjang).

Geocichla citrina innotata, M., p. 410 (partim: Maprit and Klong Bang Lai, Patiyu).

Geocichla citrina innotata Blyth.

Geocichla innotata, Blyth, Journ. Asiat. Soc. Bengal. xv, 1846, p. 370; id. op. cit. xvi, 1847, p. 146 (Malay Peninsula); A., p. 250 (partim: Bankasoon); F., p. 63 (Trang).

Geocichla citrina innotata, M., p. 410 (partim: Klong Bang Lai, Patiyu).

4 ♀. Koh Rah, Takuapa, P. Siam, 15 Feb. 1919 [Nos. 4030-1, 4051-2].

1 ♂, 2 ♀. Delisle I., Renong, P. Siam, 20 Feb. 1919 [Nos. 4133-5].

2 ♀. Victoria Point, S. Tenasserim, 24 Feb. 1919 [Nos. 4185, 4194].

2 ♀. Tapli, Renong, P. Siam, 3-6 March 1919 [Nos. 4378, 4460].

1 ♀. Tasan, Chumporn, P. Siam, 14 March 1919 [No. 4576].

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

"Iris brown; bill black pale at base; feet fleshy."

Total length ♂, 205, 212; ♀, 212, 215, 212, 208, 220, 215, 210, 198, 212; wing ♂, 111, 115; ♀, 116, 117, 115, 117, 117, 113, 112, 112, 108; tail ♂, 80, 77; ♀, 78, 78, 80, 80, 83, 78, 78, 78, 73; tarsus ♂, 31, 35; ♀, 32, 31, 30.5, 31, 33, 33, 33, 32, 32.5; bill from gape ♂, 26.5, 25.5; ♀, 28, 27, 24, 26, 27, 26.5, 27, 27, 26 mm.

In a very large series of birds we possess from the Malay Peninsula and its adjacent islands between the Isthmus of Kra and Selangor, we have seen no examples south of Trang lacking the white wing patches: they are generally largely developed and these birds are *G. c. citrina*. In Trang spotless birds, which are Blyth's *Geocichla innotata*, occur in a minority in company with spotted ones: and from the Khao Luang range, 1,200 feet, Nakorn Sritamarat, we have a series of eight examples (February and March 1922) in which occur a pair without spots, while the wing-coverts of the remainder show all stages from obsolete to large white patches. The only localities in which we have found alone birds referable to *G. c. innotata* are the island of Koh Kut, South-east Siam, and South Annam. Contrary to Baker's dictum (M., p. 410) spotless birds do occur in North Siam (*cf.* I., p. 46): this writer has also copied Oates' quite inaccurate statement (Fauna Brit. Ind., Birds, ii, p. 141) that in the extreme south of Siam (*i. e.*, South of Junk Seylon) only spotless birds occur.

In spite of the apparent evidence afforded by the birds from Koh Kut and South Annam we are strongly inclined to think that *innotata* has no real existence, even as a subspecies, and that birds to which its description applies are only a stage of *G. citrina*.

Cichlocelys sibirica davisoni Hume.

Geocichla davisoni, Hume, Stray Feathers, v, 1877, pp. 63, 136 (Muleyt mountain).

Turdulus sibiricus, A., p. 513 (Nalwabo).

Geocichla sibirica, C. i, p. 4 (Nalwabo).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, *op. cit.*, iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

No specimens of this thrush have actually been taken in Siam. It is, however, certain to occur on the higher mountains as we have a fair series from the mountains of the Malay States and Sumatra.

437. *Oreocincla aurea horsfieldi* Bp.

Oreocincla horsfieldi, Bonaparte, Rev. et Mag. Zool., May 1857, p. 205 (Java).

Oreocincla horsfieldi affinis, Richmond, Proc. Biol. Soc. Wash. xv, 1902, p. 158 (Khao Nok Ram, Trang, 3,000 ft.).

For the present we cannot admit the validity of *O. h. affinis*, founded on a single specimen and depending on a slight difference in the wing formula: we have specimens from Khao Ram and Khao Luang, 1000–2000 ft., in Nakon Sritamarat, which are not separable from Javanese birds, and Sumatran birds are undoubtedly identical also.

***Oreocincla dauma* (Lath.).**

Turdus dauma, Lath., Ind., Orn. I, 1790, p. 362 (India; Kashmir).

Oreocincla dauma, A., p. 256 (Muleyit mountain).

Geocichla dauma, C. I., p. 7. (Muleyit mountain).

It is almost certain that this bird will be found in migration in Peninsular Siam during the winter months, inasmuch as Mr. E. Seimund obtained an adult female on 29th November, 1918, on Pulo Rumpia, the largest of the Sembilan Islands, off the mouth of the Perak River, Malay States.

438. *Turdus obscurus obscurus* Gm.

Turdus obscurus obscurus, Gmelin, Syst. Nat. I, 1879, p. 816, (Baical).

Turdus obscurus, A., pp. 251, 512 (Nwalabo to Malewoon); F., p. 64 (Trang); L. p. 47 (Hue Sai, near Koh Lak); J., p. 180 (Terutau and Lontar); L., p. 111 (Ghirbi; Pulo Panjang; Junk Seylon).

Merula obscura, B., p. 5 (Junk Seylon); C. i, p. (S. Tenasserim).

♂. Mamoh, Pakchan, P. Siam, 28 Feb. 1919 [No. 4327].

♂, ♀. Hat Sanuk, near Koh Lak, Ratburi, S. W. Siam, 16-17 April 1919 [Nos. 5347, 5357].

"Iris dark; upper mandible dark, tomia and lower mandible yellow, tip dark; feet yellowish brown".

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Total length ♂, 244, 232; ♀ 223; wing ♂, 127, 124; ♀ 122; tail ♂, 98, 94; ♀ 95; tarsus ♂, 30.5, 30; ♀ 31; bill from gape ♂, 26, 26; ♀, 27 mm.

We agree with Hartert in considering *Merula subobscura* Salvad., from Taho, Upper Burma, as merely a somewhat abnormal specimen of this form.

439. *Monticola solitaria pandoo* (Sykes).

Petrocincla pandoo, Sykes, P. Z. S. 1832, p. 87 (Ghats, India).

Cyanocincla cyana, A., p. 247 (Tavoy to Malewoon).

Monticola solitaria, B., p. 5 (partim: Junk Seylon).

Monticola cyanus, C., i, p. 11 (Tenasserim).

Petrophila solitaria, F., p. 64 (Trang).

Monticola cyanea, L., p. 47 (Koh Lak).

Monticola solitarius pandoo, J., p. 180 (Lungkawi; Telibon; Trang, etc.); L., p. 111 (Ghirbi; Pulo Panjang, etc.).

♀. imm. Tung Pran, Takuatung, P. Siam, 13 Feb. 1919
[No. 3984].

"Iris dark; bill black; feet brownish black."

Total length 223; wing 122; tail 95; tarsus 30; bill from gape 30 mm.

440. *Monticola solitaria philippensis* (Müll.).

Turdus philippensis, P. L. S. Müller, Natursyst. Anhing., 1776, p. 142 (Philippines).

Cyanocincla solitaria, A., pp. 250, 512 (Tavoy to Bankasoon).

Monticola solitaria, B., p. 5 (partim: Junk Seylon); C. i, p. 12 (S. E. Asia: east of Burma)

Monticola solitarius philippensis, J., p. 181 (Pulo Telibon); L., p. 111 (Ghirbi); M., p. 411 (Maprit)

Probably somewhat rarer in our area than the preceding form.

441. *Monticola gularis* (Swinh.).

Oroecetes gularis, Swinhoe, P. Z. S., 1862, p. 318 (Peking).

Monticola gularis, L., p. 112 (Ghirbi).

This rare rock-thrush, breeding in North China, is sporadic over the Indo-Chinese Peninsula during the winter months. We have, besides the Ghirbi example, a single specimen from the Larut Hills, Central Perak.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Henicurus schistaceus (Hodgs.).

Henicurus schistaceus, Hodgson, Asiat. Res. xix, 1836, p. 189 (Nepal).

Henicurus schistaceus, A., pp. 361, 517 (Nwalabo to Pakchan); C. I, p. 27 (Tenasserim).

Not actually recorded from Peninsular Siam. Known in the southern Malay Peninsula from two localities only, Ulu Selama in North Perak, and the Semangko Pass, on the Pahang-Selangor boundary.

442. Henicurus ruficapillus (Temm.).

Henicurus ruficapillus, Temminck, Pl. Col. No. 534, 1831 (Palembang, Sumatra).

Henicurus ruficapillus, A., pp. 361, 518 (Nwalabo to Malewoon).

Hydrocichla ruficapilla, C. i, p. 29 (Southern Tenasserim); D., p. 63 (Legeh, Patani); H., p. 107 (Bandon); M., p. 409 (Tung Song).

3 ♂, 2 ♀. Tasan, Chumporn, P. Siam, 17-22 March 1919 [Nos. 4656, 4674, 4754, 4759, 4788].

"Iris dark; bill black; feet whitish".

Total length ♂, 208, 192, 199, ♀, 183, 197; wing ♂, 93, 91, 88; ♀, 86, 86; tail ♂, 90, 83, 85; ♀, 82, 83; tarsus ♂, 29, 26, 27; ♀, 29, 27. 5; bill from gape ♂, 27.5, 24, 25; ♀, 26, 25 mm.

443. Henicurus frontalis (Blyth.).

Henicurus frontalis, Blyth, Journ. Asiat. Soc. Bengal, xvi, 1847, p. 156 (Malacca).

Henicurus frontalis, A., p. 360 (Bankasoon).

Hydrocichla frontalis, C. i, p. 29 (Bankasoon); F., p. 64 (Trang); H., p. 107 (Bandon); L., p. 112 (Junk Seylon); M., p. 409 (Tung Song).

Not so common as the preceding species.

444. Larvivora cyane cyane (Pall.).

Motacilla cyane, Pallas, Reise Russ. Reichs., iii, 1776, p. 697 (Dauria).

Larvivora cyane, A., pp. 335, 516 (Nwalabo to Malewoon).

Erithacus cyane, C. I, p. 13 (Tenasserim).

Larvivora cyanea, F., p. 64 (Trang); H., p. 149 (Koh Samui); J., p. 181 (Terutau & Lontar); L., p. 112 (Pulo Panjang; Junk Seylon); M., p. 409 (Tung Song & Patiyu).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Borneo, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N.H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

1 ♀. Tapli, Pakchan, P. Siam, March 1919 [No. 4503].

1 ♂, 2 ♀ 1 ♂ imm. Tasan, Chumporn, P. Siam, 21-28 March 1919 [Nos. 4735, 4754, 4860, 4906].

2 ♂. Hat Sanuk, near Koh Lak, Ratburi, S. W. Siam, 13-18 April 1919 [Nos. 5273, 5383].

Male, "Iris dark; bill black, pale at base of lower mandible; feet whitish flesh".

Female, "Iris dark; bill horn, pinkish beneath; feet pale pink".

Total length ♂, 135, 133, 140; ♀, 134, 138, 135; wing ♂, 72, 76, 78; ♀, 74, 68, 75; tail ♂, 53, 54, 53; ♀, 48, 50, 53; tarsus ♂, 27, 24 (app.), 26; ♀, 25, 25, 26; bill from gape ♂, 18, 18, 18; ♀, 18, 17, 18 mm.

The plumage changes of this species are complicated and little understood. A very old male from Tasan, 28th March, has the whole upper surface blue, the primaries black, edged with blue, the tail glossy black, and the under surface pure white with a black patch on each side of the breast.

Another male from Hat Sanuk, 13th April, has the upper surface blue, the primaries and primaries coverts brown, the tail brownish with a blue gloss, the under surface white and the flanks fuscous. Another from the same locality, dated 18th April, is similar, but has the lower back brownish and the flanks more fuscous brown. Young birds have the primary coverts tipped with rufous brown, and young males have the rump blue at an early age.

Copsychus saularis saularis (Linn.).

Gracula saularis, Linn., Syst. Nat. 58, p. 109 (Bengal).

Copsychus saularis, A., p. 332 (Tavoy to Bankasoon); C. i, p. 21 (S. Tenasserim); G., p. 149 (Ratburi or Petchaburi).

After examining a large series of Magpie Robins from Tenasserim, Hume recorded some from the south as *saularis* and others from the same district as *musicus*. He points out, however, that in neither case are the specimens really typical and considers that true

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

saularis does not extend as far south as Moulmein: but that about 80% of birds from between that place and Victoria Point are nearer the Indian than the Sumatran form.

445. *Copsychus saularis musicus* (Raffles).

Lanius musicus, Raffles, Trans. Linn. Soc. xiii, 1822, p. 307 (Sumatra).

Copsychus musicus, A., p. 333 (Tenasserim town, Bankasoon); C. i, p. 21 (S. Tenasserim); E., p. 79 (Patani); F., p. 65 (Trang; Langkawi); K., p. 209 (Koh Lan, Inner Gulf of Siam).

Copsychus mindanensis, B., p. 6 (Junk Seylon).

Copsychus saularis, D., p. 63 (Patani).

Copsychus saularis musicus, L., p. 112 (Junk Seylon).

♂. Renong River, P. Siam, 21 Feb. 1919 [No. 4144].

♂. Tapli, Pakchan, P. Siam, 8 March 1919 [No. 1489].

♂. Tasan, Chumporn, P. Siam, 25 March 1919 [No. 4850].

♂, ♀. Koh Lak, Ratburi, S. W. Siam, 2-9 April 1919 (Nos. 4940, 5212).

"Iris dark or dark brown; bill and feet black".

Total length ♂, 211, 217, 225, 216; ♀, 207; wing ♂, 96, 99, 100, 103; ♀, 92; tail ♂, 90, 92, 93, 104; ♀, 88; tarsus ♂, 30, 34, 29, 31; ♀, 29; bill from gape ♂, 28, 28, 28, 25; ♀ 25mm.

On the whole these specimens are much nearer *C. s. musicus* than *C. s. saularis*, but it is doubtful if really typical specimens of the latter occur at all in Siam, except possibly in the extreme north.

446. *Kittacincla malabarica interposita* Rob. & Kloss.

Kittacincla malabarica interposita, Robinson & Kloss, Journ. Fed. Malay States Mus. x., 1922 p. 262 (South Annam).

Cercotrichas macrura, A. p. 333, 519 (Nwalabo to Bankasoon).

Copsychus macrourus, B., p. 8 (Junk Seylon).

Cittocincla macrura, C. i, p. 22 (Tenasserim); F., p. 65 (partim: Trang); G., p. 149 (Ratburi or Petchaburi); H., p. 108 (Bandon).

Kittacincla macrurus macrurus, Hartert, Nov. Zool. ix, 1902, p. 572 (partim: Tenasserim, Siam and P. Siam to Cochin China); L. p. 112 (Junk Seylon; Pulo Panjang).

Cittocincla tricolor, E., p. 79 (Patani).

Kittocincla macrurus tricolor, I., p. 50 (Koh Lak).

Cittocincla macroura macroura, M., p. 410 (Tung Song and Patiyeu).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♀. Koh Pipidon, Ghirbi Bay, P. Siam, 4 Feb. 1919 (No. 593).

♀. Koh Rah, Takuapa, P. Siam, 15 Feb. 1919 (No. 4024).

♂. Koh Yam Yai (Sugar-loaves Is.), Renong, P. Siam, 18 Feb. 1919 (No. 4117).

♀. De Lisle I., P. Siam, 19 Feb. 1919 (No. 4127).

♂. Renong river, P. Siam, 22 Feb. 1919 (No. 4156).

♂. Mamoh, Pakchan, P. Siam, 27-28 Feb. 1919 (Nos. 4297, 4309).

♂. Tapli, Pakchan, P. Siam, 11 March 1919 (No. 4539).

2 ♂. Tasan, Chumporn, P. Siam, 17-20 March 1919 (Nos. 4665, 4720).

2 ♂. Koh Lak, Ratburi, S. W. Siam, 4-10 April 1919 (Nos. 5016, 5234).

♂. Hat Sanuk, near Koh Lak, S. W. Siam, 15 April 1919 (No. 5313).

"Iris dark; bill black; feet pale flesh."

Total length ♂, 281, 293, 270, 270, 278, 292, 268, 272, 257, 283; ♀, 228, 210, 228; wing ♂, 97, 88, 90, 93, 93, 92, 93, 95, 90, 93; ♀, 84, 83, 86; tail ♂, 190, 168, 157, 159, 173, 176, 158, 168, 146, 173; ♀, 118, 125, 128; tarsus ♂, 27, 25, 27, 26, 27, 25, 25, 26, 24, 25; ♀, 24, 25, 25; bill from gape ♂, 21, 21, 20, 21, 24, 24, 23, 22, 21, 24; ♀, 23.5, 21, 23 mm.

In connection with the present paper we have reviewed the whole of the very considerable series in the F. M. S. Museums. In the first place it is to be noted that the species name (*vide* Richmond, Proc. U. S. Nat. Mus. xxvi, 1903, p. 512) is *K. malabarica* Scopoli (Del. Flor et Faun. Insubr. ii, 1786, p. 96), thus removing the question of *macroura*.

We are, however, thanks to Mr. W. J. F. Williamson, in a position to state that *Turdus macrourus* Gmelin (Syst. Nat. 1788, p. 820), founded on the Long-tailed Thrush, Latham (Gen. Syn. Birds, iii, 1783, p. 73, pl. xxxix), is a good subspecies, paler on the breast

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

in the males and with less black in the outer tail-feathers than in any other form except *K. m. suavis*, from Borneo, which is very distinct. We have examined three males from the type locality, the island of Pulo Condore, off Cochin-China.

Secondly, we consider that Viellot's citation of the locality for his *Turdus tricolor* (Nouv. Dict. d'Hist. Nat. xxx, 1818, p. 291, "les isles de la mer du sud"), is at least as precise as Hartert's subsequent fixation (Nov. Zool. ix, 1902, p. 571) of "India"

Further, the description by Scopoli in 1786 (Del. Flor. and Faun. Insubr. ii, p. 97) of the Malabar bird as *Muscicapa malabarica* should prevent "India" being selected for a typical locality.

We, have, therefore, further fixed the type locality of *M. tricolor* as West Java (Province of Bantam).

This form we regard as inhabiting Western Java, Sumatra, the whole of the British portion of the Malay Peninsula extending on the west coast as far as the Trang Archipelago and on the east coast to the Bandon group.

Another form is found from Trang northwards over the whole of Tenasserim, Southern Siam and eastward to Annam. The western and northern limits are not exactly known but, *vide* Gyldenstolpe, birds from North Siam are the Indian form.

The Tenasserim bird which differs from the Indian one, *K. m. malabarica*, by its darker female, and from the southern form, *K. m. tricolor*, by having the feathers of the thighs in both sexes white, hardly tinged with rusty, is without a name. We have therefore called it *K. m. interposita*.

Excluding four insular forms described by Oberholser, which we are not acquainted with, the recognizable forms of this species are:—

- (1). *K. m. malabarica* Scop. Peninsular India: part of Burma? (*vide* Sharpe and Hartert); N Siam?
- (2). *K. m. interposita* R. & K. Tenasserim, part of Siam, S. W. Central and East Siam, Annam.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

- (3). *K. m. tricolor* Vieill. S. Peninsular Siam and islands,
Malay States, Sumatra and
West Java.
(4). *K. m. macroura* Gm. Pulo Condore.
(5). *K. m. minor* Hartert. Hainan.
(5). *K. m. suavis* Sclater. Borneo.
(7). *K. m. omissa*, Hartert. East Java and Bali.
(8). *K. m. javana* Kloss. Central Java.

Kittacincla stricklandi Motley & Dilwyn, from Labuan, with a white crown and *K. melanura* Salvad., from Nias, with no white in the tail, are very distinct; perhaps sufficiently so as to be regarded as species.

447. *Kittacincla malabarica tricolor* (Vieill.).

Turdus tricolor, Vieillot, Nouv. Dict. d'Hist. Nat. xxx, 1818, p. 291 ("les isles de la mer du sud", i.e., West Java).

Cittocinclla macrura, F., p. 65 (partim: Langkawi); H., p. 150 (partim: Koh Samui and Koh Pennan); J., p. 181 (Langkawi, Telibon and Muntia Islands).

Cittocinclla tricolor, E., p. 79 (Patani).

Examples from Bangnara, Patani, that we have examined belong to this form.

Birds from the islands south of Pulo Lontar off Trang on the west coast, and from Koh Samui and Koh Pennan islands off Bandon on the east, are best referred to the southern race, though the latter does not range so far north as Bandon on the mainland. When the legs are not rusty, as is generally the case, but white, they are at least washed with ochraceous.

448. *Saxicola torquata stejnegeri* (Parrot).

Pratincola rubicola stejnegeri, Parrot, Verh. Orn. Ges. Bayern, viii, 1908, p. 124 (N. Japan).

Pratincola indica, A., p. 334 (Mergui to Malewoon).

Pratincola maura, C. i, 279 (S. Tenasserim); Oates, Faun. Brit. Ind. Birds, ii, 1890, p. 61 (Tenasserim); Williamson, Journ. N. H. Soc. Siam, ii, 1917, p. 186 (Bangkok).

Pratincola torquata stejnegeri, I., p. 51 (Koh Lak).

♀. Namchuk, Pakchan, P. Siam, 25 Feb. 1919 [No. 4206].

"Iris dark; bill and feet black".

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F.M.S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Total length 135; wing 67; tail 52; tarsus 23; bill from gape 17 mm.

We have examined twenty-six specimens collected by Mr. W. J. F. Williamson in Bangkok, all obtained between September and March: the wing lengths range between 64 and 70 mm.

We have examples of the Eastern Bush-Chat from Kuala Lumpur taken during the winter months.

It is possible that the birds referred to by Hume and Davison and by Oates in our synonymy belong in part to the following form.

449. *Saxicola torquata przwalskii* (Pleske).

Pratincola maura var. *Przwalskii*, Pleske, Wiss. Res. Przw. Reisea, vog. I, 1889, p. 46, taf. iv figs. 1, 2, 3 (Kansu).

Pratincola torquata przwalskii, M., p. 409 (Maprit).

Herbert's ♂ bird from Maprit had a wing, according to Baker, of over 72 mm., and was provisionally recorded under the above name.

The Malay Peninsula and Bangkok are obviously the wintering area of the smaller eastern race, but it is quite possible that a few individuals of the larger form visit it also.

***Calliope calliope* (Pall.).**

Motacilla calliope, Pall., Reise Russ. Reichs. iii, 1776, p. 697 (Siberia).

Calliope camtschatkensis, Williamson, Journ. N. H. Soc. Siam, ii, 1917, p. 187 (Bangkok).

This bird will probably be met with in the extreme north of our region: it is not uncommon at Bangkok in the winter.

***Cyanosylvia suecica* subsp.**

Motacilla suecica, Linn., Syst. Nat. i, 1766, p. 336 (partim: Sweden).

Cyanecula suecica, A., p. 337 (Tavoy); Williamson, Journ. N. H. Soc. Siam, iii, 1918, p. 21 (Bangkok).

Numerous examples of this species were taken at Bangkok during the winter season of 1917-18 by Mr. W. J. F. Williamson at a time of exceptional floods in that part of the country, but it is not certain that the bird occurs there regularly: it may possibly be met with eventually just within our area.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gardner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

SYLVIIDAE.

WARBLERS.

1	{ Upper plumage streaked 2	
	{ Upper plumage without streaks 6	
2	{ Wing more than 3.5 inches <i>Megalurus palustris</i>	
	{ Wing less than 3 inches 3	
3	{ Breast and flanks streaked <i>Locustella lanceolata</i>	
	{ Breast and flanks without streaks 4	
4	{ Tail much longer than wing <i>Prinia</i> sp.	
	{ Tail shorter than wing 5	
5	{ Wing more than 2.2 inches <i>Locustella certhiola</i>	
	{ Wing less than 2.1 inches <i>Cisticola</i> spp.	
6	{ Supercilium absent or small 7	
	{ A broad pale supercilium extending to the nape 14	
7	{ Wing more than 3 inches 8	
	{ Wing less than 3 inches 9	
8	{ First primary minute <i>Acrocephalus arundinaceus orientalis</i>	
	{ First primary more than 1/3 length of second <i>Phragmaticola aedon</i> ..	
9	{ Crown dusky 10	
	{ Crown rufous or green (in immature birds) 11	
10	{ Belly white or creamy <i>Franklinia rufescens</i>	
	{ Belly bright yellow <i>Burnesia flaviventris</i>	
11	{ Belly bright yellow <i>Phyllergates cucullatus thais</i>	
	{ Belly white or creamy 12	
12	{ Back ashy green <i>Orthotomus ruficeps</i>	
	{ Back green 13	
13	{ Edge of wing bright yellow <i>Orthotomus atrogularis</i>	
	{ Edge of wing creamy <i>O. sutorius</i> subsp.	
14	{ Upper parts brown or russet 15	
	{ Upper parts olive green 18	
15	{ Tail less than 0.6 length of wing <i>Urosphena squamiceps</i>	
	{ Tail more than 0.75 length of wing 16	
16	{ Supercilium bordered above with blackish <i>Acrocephalus bistrigiceps</i>	
	{ No black streak above the supercilium 17	
17	{ No pale tips to the wing coverts <i>Phylloscopus fuscatus</i>	
	{ Wing coverts with pale tips <i>P. tenellipes</i>	
18	{ A distinct pale coronal stripe 19	
	{ Coronal stripe absent or very indistinct 20	
19	{ Wing over 2.4 inches : inner webs of outer <i>P. occipitalis coronatus</i>	
	{ tail feathers not white	
	{ Wing less than 2.4 inches : inner webs of outer	
	{ tail feathers white <i>P. davisoni</i>	
20	{ First primary small and extending less than 3 mm.	
	{ beyond the tips of the upper wing-coverts 21	
	{ First primary comparatively large and extending 3 mm.	
	{ or more beyond the wing-coverts 22	

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
 J. Robinson, Journ. F. M. S. Mus. vii, 1917.
 K. Kloss, *Ibis*, 1918.
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

- M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
 (first and second parts).
 M. I. Baker, op. cit., iv, 1920 (third part).
 M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

- | | | | |
|----|---|---------------------------------|----|
| 21 | { First primary rarely longer than the wing-coverts .. | <i>P. b. borealis</i> | |
| | { First primary 1 or 2 mm. longer than the wing-coverts .. | <i>P. b. xanthodryas</i> | |
| 22 | { Second primary between 8th and 10th .. | <i>P. lugubris</i> | |
| | { Second primary between 6th and 8th .. | .. | 23 |
| 23 | { Wing more than 2.5 inches .. | <i>P. magnirostris</i> | |
| | { Wing less than 2.5 inches .. | .. | 24 |
| | { No coronal streak, supercilium creamy white .. | <i>P. nitidus plumbeitarsus</i> | |
| 24 | { A very indistinct and broken coronal streak, supercilium .. | .. | |
| | { tinged with greenish .. | <i>P. i. inornatus</i> | |

Megalurus palustris palustris Horsf.

Megalurus palustris, Horsfield, Trans. Linn. Soc. xiii, 1821, p. 159 (Java); M., p. 202 (Bangkok); Williamson, Journ. Nat. Hist. Soc. Siam, iii, 1918, p. 19 (Bangkok).

This species, known in Bangkok, may well occur also in the neighbourhood of Petchaburi. Bangs has separated the North Burma bird under the name of *M. p. andrewsi* (Bull. Amer. Mus. N. H., xlv, 1921, p. 592): Bangkok specimens do not differ from Javanese birds.

450. *Locustella lanceolata* (Temm.).

Sylvia lanceolata, Temminck, Man. d'Orn. Ed. 2, iv, 1840, p. 614 (Russia).

Locustella lanceolata, A., p. 339 (Pakchan, Bankasoon, Malewoon); C., i, p. 104 (S. Tenasserim); F., p. 66 (Trang).

♂. Namehut, Pakchan, P. Siam, 26 Feb. 1919 [No. 4247].

♀. Tasan, Chumporn, P. Siam, 26 March 1919 [No. 4865].

"Iris dark; maxilla blackish horn, mandible pale pinkish horn; feet fleshy."

Total length ♂, 131; ♀, 132; wing ♂, 54; ♀, 53; tail ♂, 53; ♀, 49; tarsus ♂, 15.5; ♀, 17; bill from gape ♂, 14; ♀, 16 mm.

451. *Locustella certhiola* (Pall.).

Motacilla certhiola, Pallas, Zoogr. Rosso. Asiat. i, 1827, p. 509 (Baikal).

♀. Kandhuli, Chaiya, P. Siam, 21 Sept. 1919 [E. Seimund].

Wing 60 mm.

Cisticola juncidis cursitans (Franklin).

Prinia cursitans, Franklin, P. Z. S. 1831, p. 118 (Hindustan).

Cisticola cursitans, Williamson, Journ. N. H. Soc. Siam. i, 1914, p. 87 (Bangkok).

Cisticola cursitans cursitans, M., p. 200 (Bangkok).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1892.
C. Oates, Birds Brit. Borneo, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Cisticola exilis subsp.

Malurus exilis, Vig. & Horsf., Trans. Linn. Soc. xv, 1827, p. 223 (New South Wales).

Cisticola exilis (volitans), Williamson, Journ. N. H. Soc. Siam, i, 1914, p. 197 (Bangkok).

In the absence of material we cannot deal with the birds of this genus occurring locally. Two forms appear to be represented.

Prinia sp.

Drymoica extensicauda, A., p. 350 (Tavoy).

Prinia blanfordi, C. i, p. 112 (Tavoy).

A form of *Prinia* may be found in our area, since birds of this genus occur in Tavoy and Bangkok. The former are *Prinia blanfordi* (Walden) from Tounghoo: the latter have been named *Prinia inornata herberti* by Baker (Bull. B. O. C. xxxviii, 1918, p. 39, id. M., p. 203) who further says that in Siam and Tenasserim and in the Malay Peninsula the rufous form *P. i. blanfordi* is found. The statement appears to be without foundation. Such specimens as we have seen from Siam appear inseparable from *Prinia polychroa* (Temm.) from Java (*cf.* Kloss, Journ. N. H. Soc. Siam, iii, 1919, p. 451).

452. *Acrocephalus arundinaceus orientalis* (Temm. & Schleg.).

Salicaria turdina orientalis, Temminck & Schlegel, Faun. Japon., Aves, 1847, p. 50, pl. 20 B (Japan).

Acrocephalus orientalis, A., p. 338 (Tavoy, Malewoon); B., p. 10 (Junk Seylon); C. i, p. 93 (S. Tenasserim).

2 ♀. Namchut, Pakchan, P. Siam, 24-26 Feb. 1919 [Nos. 4201, 4245].

"Iris dark; bill yellow, culmen dark, or maxilla dark, mandible pinkish horn; feet yellowish lead or dull greenish slate."

Total length 193, 194; wing 84, 83; tail 83, 80; tarsus 31, 29; bill from gape 23, 25 mm.

453. *Acrocephalus bistrigiceps* Swinh.

Acrocephalus bistrigiceps, Swinhoe, Ibis, 1860, p. 51 (Amoy); A., p. 338 (Tavoy); H., p. 150 (Koh Pennan).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
J. Robinson, Journ. F. M. S. Mus. vii, 1917.
K. Kloss, Ibis, 1918.
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first and second parts).
M. I. Baker, op. cit., iv, 1920 (third part).
M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

2 ♀. Mamoh, Pakchan, P. Siam, 27 Feb. 1919 [Nos. 4281, 4296].

"Iris brown; maxilla dark horn, mandible yellow; feet grey or greenish".

Total length 128, 132; wing 52, 53; tail 49, 54; tarsus 20, 20.5; bill from gape 15, 15 mm.

454. *Phragmaticola aedon* (Pall.).

Muscicapa aedon, Pallas, Reise. Russ. Reichs, iii, 1776, p. 695 (Dauria).

Arundinax aedon, A., p. 359 (Bopyin to Malewoon); C., i, p. 99 (Tenasserim); L., p. 113 (Ghirbi).

Phragmaticola aedon, M., p. 201 (Maprit).

♀. Namchut, Pakchan, P. Siam, 25 Feb. 1919 [No. 4237].

3 ♂, 2 ♀. Koh Lak, S. W. Siam, 4-10 April 1919 [Nos. 5051, 5063, 5082, 5224-5].

"Iris dark; maxilla horn, mandible pale fleshy or yellow; feet greenish, grey or slate."

Total length ♂, 192, 187, 195; ♀, 194, 188, 182; wing ♂, 75, 78, 76; ♀, 76, 77, 75; tail ♂, 85, 90, 90; ♀, 86, 88, 87; tarsus, ♂, 27, 26, 26.5; ♀, 29, 27, 28; bill from gape ♂, 21, 20, 21.5; ♀, 23, 21, 20 mm.

455. *Franklinia rufescens* (Blyth).

Prinia rufescens, Blyth, Journ. Asiat. Soc. Bengal xvi, 1847, p. 456 (Arracan).

Prinia beavani, Walden, P. Z. S., 1866, p. 551 (Shwegyin, Burma).

Cisticola beavani, C. i, p. 121 (Tenasserim).

Franklinia rufescens, F., p. 67 (Trang); L., p. 113 (Ghirbi); M., p. 201 (Maprit and Tung Song).

♂. Namchuk, Pakchan, P. Siam, 25 Feb. 1919 [No. 4222].

♂, ♀. Tasan, Chumporn, P. Siam, 23 March 1919 [Nos. 4807-8].

"Iris light orange; bill black, pale at base, feet pale yellowish flesh."

Total length ♂, 111, 113; ♀, 108; wing ♂, 41, 42; ♀, 42; tail ♂, 44, 48; ♀, 43; tarsus ♂, 20.5, 20.5; ♀, 19.5; bill from gape ♂, 15, 15; ♀, 14.5 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Probably common in grassy places throughout the country.

There is no evidence that birds from Arracan north to Assam (*F. rufescens*), and those from N. Tenasserim south through the Malay Peninsula (*F. beavani*), have any constant differences. *F. poliocephala* Anderson, from Kumaon, appears to belong to a different section of the genus.

456. *Burnesia flaviventris flaviventris* Deless.

Orthotomus flaviventris, Delessert, Rev. Zool., 1840, p. 101 (Bhutan).
Prinia flaviventris, A., p. 347 (Bankasoon, Malewoon); C. i, p. 111 (S. Tenasserim).

Probably common in the country, though the only specimens we have seen are two in Mr. Williamson's collection from Bangnara, Patani, shot in June.

457. *Orthotomus ruficeps* (Less.).

Edela ruficeps, Lesson, Traité d' Orn., 1831, p. 309 (Coast of North-west Australia, errore : substitute Sumatra); A., p. 346 (Malewoon); C. i, p. 109 (Malewoon); F., p. 66 (Trang); H., p. 108 (Bandon); M., p. 200 (Maprit).

♂, ♀. Tasan, Chumporn, P. Siam, 21 March 1919 [Nos. 4741-4].

"Iris brown; maxilla horn, mandible pale fleshy; feet brownish or purplish flesh."

Total length ♂, 129; ♀, 118; wing ♂, 50; ♀, 46; tail ♂, 48; ♀, 41; tarsus ♂, 22.5; ♀, 20.5; bill from gape ♂, 19; ♀, 18.5 mm.

458. *Orthotomus atrogularis* Temm.

Orthotomus atrogularis, Temminck, Pl. Col. livr. 101 (Text), 1836 (Malacca, Borneo); A., p. 345 (Tavoy to Malewoon); B., p. 10 (Junk Seylon); C. i, p. 109 (Tenasserim); E., p. 77 (Patani); F., p. 66 (Langkawi); H., pp. 108, 150 (Bandon; Koh Samui; Koh Pennan); J., p. 112 (Langkawi); L., p. 113 (Pulo Panjang).

Orthotomus nitidus, Hume, Stray Feathers, ii, 1874, p. 507 (Tenasserim).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
J. Robinson, Journ. F. M. S. Mus. vii, 1917.
K. Kloss, Ibis, 1918.
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).
M. 1. Baker, op. cit., iv, 1920 (third part).
M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♀. Victoria Point, S. Tenasserim, 24 Feb. 1919 [No. 4172].

♂. Mamoh, Pakchan, P. Siam, 27 Feb. 1919 [No. 4286].

♂. Tapli, Pakchan, P. Siam, 3 March 1919 [No. 4395].

♂. Tasan, Chumporn, P. Siam, 22 March, 1919 [No. 4784].

2 ♀. Koh Lak, S. W. Siam, 2-8 April 1919 [Nos. 4960, 5192].

5 ♂, 1 ♀. Hat Sanuk, S. W. Siam, 12-18 April 1919 [Nos. 5249, 5297, 5315, 5354, 5384-5].

"Iris brown; maxilla horn, mandible pinkish; feet brownish fleshy."

Total length ♂, 108, 113, 113, 112, 113, 113, 110, 111; ♀. 116, 108, 108, 98; wing ♂, 43, 43, 45, 46, 46, 44, 45; ♀, 43, 43, 42, 43; tail ♂, 38, 38, 42, 42, 40, 44, 43, 40; ♀, 38, 37, 38, 35; tarsus ♂, 22, 20, 18.5, 20, 20, 19, 19.5, 19; ♀, 21, 18.5, 18, 19; bill from gape ♂, 18, 18, 18, 18, 17, 17, 18, 17; ♀, 17, 16, 18, 17.5 mm.

Two of the females have the head green like the back.

459. *Orthotomus sepium cineracens* Blyth.

Orthotomus cineracens Blyth, Journ. Asiat. Soc. Bengal, xiv, 1845, p. 589 (Malacca).

♀ Lacon, P. Siam, 27 Nov. 1923 (W. J. F. Williamson Coll.)

"Iris yellowish brown; bill black, lower mandible pale fleshy, feet fleshy."

Total length 112; wing 45; tail 41; tarsus 18; bill from gape 18 mm.

This specimen is apparently the most northerly on record in the Malay Peninsula, but there appears to be an example from Cochin-China in the British Museum.

460. *Orthotomus sutorius* > *maculicollis* (Moore).

Motacilla sutoria Forster, Ind. Zool. 1781, p. 17, pl. 8 (Calcutta).

Orthotomus maculicollis, Moore, P. Z. S. 1854, p. 309 (Malacca).

Orthotomus sutorius, A., p. 345 (Mergui).

Sutoria maculicollis, F., p. 66 (Trang).

Sutoria sutoria, L., p. 44 (Koh Lak).

Sutoria sutoria phyllorapheus, Gyldenstolpe, Ibis 1920, p. 471 (Koh Lak).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂, ♀. Mamoh, P. Siam, 27 Feb. 1919 [Nos. 4282, 4310].

7 ♂, ♀. Koh Lak, S. W. Siam, 3-10 April 1919 [Nos. 4996, 5043, 5080, 5116, 5164-5, 5206, 5233].

"Iris brown, light red or pale orange; maxilla pinkish horn, mandible pinkish fleshy; feet yellowish fleshy."

Total length ♂, 132, 138, 127, 142, 122, 140, 124, 141; ♀, 110, 118; wing ♂, 44, 48, 46, 46, 44, 48, 44, 46; ♀, 43, 43; tail ♂, 61, 75, 58, 72, 65, 73, 58, 68; ♀, 38, 40; tarsus ♂, 18, 20, 21, 22, 18.5, 19, 20, 20; ♀, 20, 19.5; bill from gape ♂, 17, 17, 17, 16, —, 17, 16.5, 17.5; ♀, 16, 17 mm.

These birds are neither typical *sutorius* of Bengal, nor *maculicollis*, but intermediate; the ear-coverts are less largely black than in the last, but are darker and more mottled than in the two former.

Gyldenstolpe has recorded Koh Lak specimens by a name given to Chinese birds, but if the latter are distinct the correct name for them seems to be *O. s. longicaudus* (Gm., Syst. Nat. i, 1788, p. 954), founded on "le petit figuier à longue queue de la Chine," of Sonnerat (Voy. Indes, ii, 1782, p. 206), a name long prior to *phyllorapheus* Swinhoe (Ibis, 1860, p. 49: Amoy).

461. *Phyllergates cucullatus thais* Rob. & Kloss.

Journ. Fed. Malay States Mus. xi, 1923, p. 56 (Khao Luang 5,000-5,800 ft., Nakon Sritamarat).

Five examples were obtained at the type locality by Mr. H. M. Pendlebury in March 1922. Birds of the Malay States agree with those of Borneo and are *P. cucullatus cinereicollis* Sharpe.

462. *Urophlexis squameiceps* (Swinh.).

Tribura squameiceps, Swinhoe, P. Z. S. 1863, p. 292 (Canton).

Urosphena squameiceps, A., p. 343 (Bankasoon); C. i, p. 100 (Bankasoon); M., p. 203 (Maprit).

♂, ♀. Tasan, P. Siam, 26 March 1919 [Nos. 4686, 4871].

"Iris dark hazel; maxilla dark horn, mandible pinkish flesh; feet whitish".

Total length ♂, 106; ♀, 101; wing ♂, 53; ♀, 49; tail ♂, 28; ♀, 27; tarsus ♂, 18.5; ♀, 19; bill from gape ♂, 14; ♀, 14 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

463. *Phylloscopus fuscatus fuscatus* (Blyth).

Phyllopneuste fuscata, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 113 (Calcutta).

Phylloscopus fuscatus, A., p. 517 (Tavoy); Williamson, Journ. N. H. Soc. Siam i, 1914, p. 86 (Bangkok).

Herbivocula fuscata, C. i, p. 92 (Tavoy).

♂. Koh Lak, S. W. Siam, 2 April 1919 [No. 4973].

"Iris dark; bill dark with pale base; feet brownish olive."

Total length 135; wing 67; tail 57; tarsus 23; bill from gape 14 mm.

Mr. W. J. F. Williamson has three specimens obtained in December at Koh Lak and Nong Kae, S. W. Siam.

464. *Phylloscopus tenellipes* Swinh.

Phylloscopus tenellipes, Swinhoe, Ibis, 1860, p. 53 (Amoy); A., pp. 354, 517 (Tavoy to Bankasoon); C. i, p. 81 (S. Tenasserim); F., p. 65 (Trang); K., p. 212 (Koh Lak).

♀. Tapli, Pakchan, P. Siam, 11 March 1919 [No. 4537].

♂. Hat Sanuk, S. W. Siam, 18 April 1919 [No. 5377].

"Iris dark; bill horny, base of mandible pale; feet purplish flesh or pale brown."

Total length ♂, 122; ♀, 122; wing ♂, 60; ♀, 63; tail ♂, 45; ♀, 54; tarsus ♂, 19; ♀, 19; bill from gape ♂, 14; ♀, 14 mm.

Mr. Williamson has examples from Nong Kae and Langsuen collected in November and January.

465. *Phylloscopus occipitalis coronatus* (Temm. & Schleg.).

Ficedula coronata, Temminck & Schlegel, Faun. Japon, Aves, 1847, p. 48, pl. 18 (Japan).

Reguloides coronata, A., p. 356 (Mergui to Bankasoon).

Phyllopneuste coronata, B., p. 10 (Junk Seylon).

Phylloscopus coronatus, C. i, p. 85 (S. Tenasserim); F., p. 66 (Trang); L., p. 114 (Junk Seylon).

Aconthopneuste occipitalis coronata, K., p. 212 (Koh Lak).

Phylloscopus occipitalis coronatus, M., p. 203 (Tung Song).

♀. Mamoh, Pakchan, Siam, 28 Feb. 1919 [No. 4326].

♂. Tapli, Pakchan, P. Siam, 8 March 1919 [No. 4507].

♂, 2 ♀. Tasan, Chumporn, P. Siam, 13-20 March 1919 [Nos. 4552, 4698, 4705].

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanka, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Muscums, v, 1915.

♀. Koh Lak, S. W. Siam, 4 April 1919 [No. 5050].

"Iris dark; maxilla horny, mandible yellow; feet yellow to olive".

Total length ♂, 125, 125; ♀, 125, 116, 121, 127; wing ♂, 61, 60; ♀, 58, 60, 63, 58; tail ♂, 49, 53; ♀, 52, 52, 52, 48; tarsus ♂, 18, 19; ♀, 17, 16.5, 17, 18; bill from gape ♂, 17, 16; ♀, 15.5, 14, 17, 14.5 mm.

Phylloscopus davisoni Oates.

Acanthopneuste davisoni, Oates, Faun. Brit. Ind. Birds i, 1889, p. 420 (Muleyit).

Phylloscopus presbytes, C. i, p. 86 (Muleyit).

This bird, which breeds on Muleyit, may eventually be discovered on the mountains of the Siam-Tenasserim range. A small species, with wing of about 53 mm.

466. *Phylloscopus borealis borealis* (Blas.).

Phyllopneuste borealis, Blasius, Naumannia, 1858, p. 313 (Ochotskian Sea).

Phylloscopus borealis, A., p. 352 (Shymotee to Malewoon); C. i, p. 77 (S. Tenasserim); E., p. 78 (Pattani); F., p. 65 (Trang); H., p. 150 (partim: Koh Samui); I., p. 45 (Koh Lak); J., p. 183 (Langkawi, Terutau and Butang Islands).

Acanthopneuste borealis borealis, K., p. 212 (Koh Lak).

Phylloscopus borealis borealis, L., p. 113 (Ghirbi; Pulo Panjang; Junk Seylon); M., p. 203 (Tung Song).

♂, 2 ♀. Koh Pra Tung, P. Siam, 18 Feb. 1919 [Nos. 4101-3].

♂. Victoria Point, S. Tenasserim, 24 Feb. 1919 [No. 4192].

♂, ♀. Tasan, Chumporn, P. Siam, 15-24 March 1919 [Nos. 4603, 4837].

♂, ♀. Koh Lak, S. W. Siam, 6-9 April 1919 [Nos. 5118, 5204].

♂, 3 ♀. Hat Sanuk, S. W. Siam, 15-18 April 1919 [Nos. 5303, 5355, 5375-6].

"Iris dark; maxilla dark horn, mandible yellow; feet brownish yellow to olive brown".

Total length ♂, 118, 123, 123, 125, 131; ♀, 123, 127, 120, 121, 123, 122; wing ♂, 63, 58, 65, 67, 68; ♀, 65, 67, 56, 64, 65, 63; tail ♂, 48, 43, 52, 56, 53; ♀, 50, 53, 48, 52, 52, 53; tarsus ♂, 18, 18, 18, 19.5, 20; ♀, 18.5, 19, 17, 19, 18.5, 19; bill from gape ♂, 15, 15, 16, 15, 14; ♀, 15.5, 17, 15, 15, 16, 14 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, *Ibis*, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

467. *Phylloscopus borealis xanthodryas* Swinh.

Phylloscopus xanthodryas, Swinhoe, P. Z. S. 1863, p. 296 (Amoy).

Phylloscopus borealis, H., p. 150 (partim: Koh Pennan).

Phylloscopus borealis xanthodryas, J., p. 183 (Butang Island and Koh Pennan); K., p. 212 (Koh Lak).

♀. Tapli, Pakchan, P. Siam, 4 March 1919 [No. 4418].

"Iris dark; maxilla horn, mandible yellow; feet olive."

Total length 122; wing 64; tail 52; tarsus 20; bill from gape 17 mm.

468. *Phylloscopus lugubris* (Blyth).

Phyllopneuste lugubris, Blyth, Ann. & Mag. Nat. Hist. xii, 1843, p. 98 (Calcutta).

Phylloscopus lugubris, C. i, p. 83.

2 ♂. Tapli, P. Siam, 2-8 March 1919 [Nos. 4357, 4506].

2 ♂, 2 ♀. Koh Lak, S. W. Siam, 5-9 April 1919 [Nos. 5069, 5151, 5184, 5216]

2 ♀. Hat Sanuk, S. W. Siam, 14-19 April 1919 [Nos. 5284, 5405].

"Iris dark; maxilla horn, mandible yellow; feet brownish yellow, brown or olive."

Total length ♂, 112, 116, 115, 113; ♀, 113, 118, 121, 117; wing ♂, 56, 56, 65, 55; ♀, 54, 62, 64, 59; tail ♂, 46, 45, —, 46; ♀, 46, 51, 52, 50; tarsus ♂, 18, 18, 17, 17; ♀, 18, 20, 18, 18; bill from gape ♂, 13.5, 14.5, 14, 15.5; ♀, 13, 14, 15, 15 mm.

Phylloscopus magnirostris Blyth.

Blyth, Journ. Asiat. Soc. Bengal xii, 1843, p. 996 (Calcutta); C. i, p. 82.

Oates states (*t. c.*, p. 83) that Hume has recorded this bird from Kurroo (?) in the Malay Peninsula. It occurs in Tenasserim and may eventually be recognised from our area. One of the larger species with wing of 62-72 mm.

469. *Phylloscopus nitidus plumbeitarsus* Swinh.

Phylloscopus plumbeitarsus, Swinhoe, Ibis, 1861, p. 975 (between Taku and Peking).

Phylloscopus seebohmii, A., p. 356 (Tavoy).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Phylloscopus nitidus plumbeitarsus, I., p. 45 (Koh Lak).

Phylloscopus viridanus, C. i, p. 80 (Tavoy).

Acanthopneuste plumbeitarsus, Oates, Faun. Brit. Ind. Birds, i, p. 414 (Mergui).

- 2 ♂, ♀. Tapli, Pakchan, P. Siam, 4-7 March 1919 [Nos. 4394 4439, 4477].

♂. Tasan, Chumporn, P. Siam, 21 March 1919 [No. 4749].

♂, ♀. Koh Lak, 3-8 April 1919 [Nos. 4995, 5151, 5161].

"Iris dark; bill blackish, base of mandible pale; feet yellowish brown, brown or olive."

Total length ♂, 113, 102, 103; ♀, 110, 105; wing ♂, 59, 55, 58; ♀, 55, 51; tail ♂, 48, 43, 43; ♀, 42, 40; tarsus ♂, 18, 17, 16; ♀, 16, 18; bill from gape ♂, 14, 12, 11; ♀, 13, 11.5 mm.

We have determined these specimens, as above, with some hesitation since, like so many of the *Phylloscopi* met with in Malay-sia, they are all in very worn plumage.

470. *Phylloscopus inornatus* (Blyth).

Regulus inornatus, Blyth, Journ. Asiat. Soc. Bengal xi, 1842, p. 191 (Calcutta).

Phylloscopus inornatus inornatus, Ticehurst, Ibis, 1922, p. 147.

Phylloscopus humei praemium, Mathews & Iredale, Austr. Avian Record, iii, 1915, p. 44 ("Russia" ex. Gmelin); M., p. 202 (Patiyu).

Reguloides superciliosus, A., p. 358 (Mergui).

Phylloscopus superciliosus, C. i, p. 87 (Mergui); F., p. 66 (Trang).

Phylloscopus superciliosa superciliosa, J., p. 183 (Terutau and Teli-bon Islands); K., p. 211 (Koh Lak); L., p. 113 (Ghirbi and Pulo Panjang).

1 sex inc. Tasan, P. Siam, 17 March 1919 [No. 4640].

2 ♀. Koh Lak, S. W. Siam, 2-8 April 1919 [Nos. 4963, 5150].

"Iris dark; maxilla black or horn; mandible yellow, tip dark; feet olive green or pale brown".

Total length 111, —, 108; wing 58, 61, 53; tail 47, —, 39; tarsus 19, 16, 17.5; bill from gape 12.5, 11, 12.5 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

LANIIDAE.

SHRIKES.

1	{ A long crest, wings more than 4.75 inches	<i>Platylophus galericulatus ardesiacus</i>	
	{ No crest, wings less than 4.75 inches	.. .. .	2
2	{ Wings more than 2.75 inches, a broad blackish check-bar	.. .. .	3
	{ Wings less than 2.75 inches, no check-bar	.. .. .	9
3	{ Tail square	.. .. .	4
	{ Tail graduated	.. .. .	5
4	{ Wings 4-4.75 inches, mantle in males browner	<i>Tephrodornis gularis annectens</i>	
	{ Wings 3.75-4.1 inches, mantle in males greyer	.. .. . <i>T. g. fretensis</i>	
5	{ Crown and central tail-feathers blackish	.. .. .	6
	{ Crown not black, central tail-feathers brownish	.. .. .	7
6	{ Under tail coverts white; tail black and white, shorter	.. .. . <i>Lanius collurioides</i>	
	{ Under tail coverts rufous; tail black and rufous, longer	<i>L. nigricaps longicaudatus</i>	
7	{ Back barred with black	.. .. . <i>L. tigrinus</i>	
	{ Back not barred	.. .. .	8
8	{ Whole crown brown	.. .. . <i>L. c. critatus</i>	
	{ Whole crown chestnut	.. .. . <i>L. c. superciliosus</i>	
	{ Crown grey, or grey and brown	.. .. . <i>L. c. lucionensis</i>	
9	{ Wings entirely black	.. .. . <i>Hemipus hirundinaceus</i>	
	{ Wings partly white	.. .. . <i>H. picatus</i>	

471. *Platylophus galericulatus ardesiacus* (Cab.).

Lophocitta ardesciaca, Cabanis, in Bp. Consp. Av. 1850, p. 374 (Java ?); id., Mus. Hein, i, 1850, p. 219 (Sumatra ?).

Platylophus ardesiacus, A., p. 880 (Bankasoon, Malewoon); C., i, p. 410 (Tenasserim); H., p. 109 (Bandon); I., p. 42 (Hat Sanuk, near Koh Lak).

2 ♂, 2 ♀ subad, Tasan, Chumporn, P. Siam, 14-26 March 1919 [Nos. 4567, 4700, 4863-4].

"Iris reddish; bill black; feet greenish black",

Total length ♂, 270, 270; ♀, 245, 265; wing ♂, 137, 139; ♀, 126, 126, tail ♂, 130, 125; ♀, 115, 118; tarsus ♂, 32, 33; ♀, 32, 32; bill from gape ♂, 34, 34; ♀, 30.5, 34 mm.

This is the Malayan form, wrongly attributed to Sumatra or Java: we cite as type locality the Settlement of Malacca.

472. *Hemipus picatus* (Sykes).

Muscicapa picata, Skyes, P. Z. S. 1832, p. 85 (Dekkan).

Hemipus picatus, A., p. 207 (Tavoy to Bankasoon); C. i, p. 259 (Tenasserim); F., p. 69 (Trang); H., p. 108 (Bandon); K., p. 213 (Koh Lak).

Hemipus picatus picatus, M., p. 205 (Tung Song and Patiyyu).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂. Tung Pran, Takuatung, P. Siam, 12 Feb. 1919 [No. 3959].

♂, ♀. Renong River, P. Siam, 21-22 Feb. 1919 [Nos. 4146-57].

♀. Mamoh, Pakchan, P. Siam, 28 Feb. 1919 [No. 4323].

2 ♂, 3 ♀. Tapli, Pakchan, P. Siam, 5 March 1919 [Nos. 4436-7, 4484, 4498-9].

♂, ♀. Tasan, P. Siam, 15-18 March 1919 [Nos. 4601, 4907].

3 ♂, ♀. Koh Lak, S. W. Siam, 5-8 March 1919 [Nos. 5095, 5154, 5162-3].

♂. Hat Sanuk, S. W. Siam, 19 April 1919 [No. 5402].

"Iris dark brown; bill black; feet black or greyish black".

Total length ♂, 142, 140, 135, 131, 143, 147, 140 145; ♀, 137, 141, 143, 135, 130, 142, 142; wing ♂, 62, 62, 61, 63, 63, 62, 63, 63; ♀, 61, 62, 61, 61, 62, 64, 63; tail ♂, 60, 62, 58, 63, 62, 58, 61, 64; ♀, 62, 67, 67, 65, 61, 65, 62; tarsus ♂, 13, 17, 13, 13.5, 12, 13, 13, 11.5; ♀, 13, 12.5, 13.5, 15, 15, 13, 12; bill from gape ♂, 20, 18, 18, 18, 19, 19.5, 17, 20; ♀, 17, 18, 18, 18, 18, 17.5, 17 mm.

473. *Hemipus hirundinaceus* (Temm.).

Muscicapa hirundinacea, Temm., Pl. Col. 1922, pl. 119 (Java).

Hemipus obscurus, Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 60 (Patani); id. op. cit., iii, 1918, p. 20 (Patani and Chum-porn).

The examples recorded by Williamson from Patani seem to be the only birds met with in Siam: the specimen from Chumporn referred by him to this species belongs to the previous species

474. *Tephrodornis gularis annectens* Rob. & Kloss.

Tephrodornis pelvica annectens, Rob. & Kloss, Journ. F. M. S. Mus, viii, pt. 2, 1918, p. 222 (Trang, P. Siam); L., p. 114 (Junk Seylon).

Tephrodornis pelvica, A., pp. 205, 507 (Tavoy to Malewoon); C., i, p. 257 (Pegu & Tenasserim); K., p. 213 (Koh Lak); M., p. 206 (Hup Bon, S. E. Siam).

Tephrodornis gularis, B., p. 14 (Junk Seylon); F., p. 69 (partim: Trang); H., p. 108 (Bandon).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus, vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

4 ♂, 2 ♀. Tapli, Pakchan, 2-7 March 1919 [Nos. 4351-3; 4431-2, 4476].

3 ♂, 2 ♀, Tasan, Chumporn, 13 March to 5 April 1919 [Nos. 4542, 4702, 4736, 4742, 5087].

"Iris dull yellow; bill black; feet greyish black or black".

Total length ♂, 191, 198, 199, 196, 182, 197, 192; ♀, 209, 193, 203, 183; wing ♂, 107, 109, 108, 110, 104, 107, 110; ♀, 110, 102, 110, 106; tail ♂, 80, 83, 82, 75, 74, 78, 81; ♀, 85, 80, 79, 85; tarsus ♂, 18, 17, 18.5, 20, 20, 20, 17; ♀, 21, 18, 19, 18; bill from gape ♂, 28, 28, 30, 29, 27, 29, 27; ♀, 30, 27, 29, 27 mm.

We have recorded the above birds as *T. g. annectens* since, though ranging a little larger, they do not differ in colour from the type series. On further consideration it appears to us desirable to extend the habitat of the form and to include in it birds from Central Burma and Annam. The range of *T. g. pelvica* will be, approximately, the Eastern Himalayas, Assam and Manipur (*cf.* Hume, S. F. xi, p. 93). The more southern birds are smaller and the grey of the head is less restricted (*cf.* A., p. 205; M., p. 205); but they are neither so small nor so extensively grey as *T. g. fretensis* R. & K., from the southern Malay States and N. E. Sumatra. The races may be indicated somewhat as follows:

- (i). *T. g. gularis* (Raffles: syn. *virgatus* Temm.) Size smallest: wing 87-94. The male has a whitish forehead and black tail; is pure grey above and white below, slightly suffused with vinaceous on the breast. Java and S. W. Sumatran coast lands (typical locality).
- (ii). *T. g. fretensis* R. & K. Size small: wing 97-105. Forehead not white, grey of nape extending over mantle and back, tail blackish brown, underparts largely vinaceous. Sumatra (except the S. W. coastlands), Malay States (type locality) and Patani.
- (iii). *T. g. annectens* R. & K. Size medium: wing 102-119. Grey of nape less extensive. P. Siam (type locality) to South Annam and Central Burma.
- (iv). *T. g. pelvica* (Hodgs.). Size largest: wing 115-130 or more. Grey strictly confined to crown and nape. Manipur and Assam to Nepal (type locality).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

475. *Tephrodornis gularis fretensis* Rob. & Kloss.

Robinson & Kloss, Journ. Straits Branch Roy. Asiat. Soc. No. 18, 1920, p. 109 (Negri Sembilan, Malay States; N. E. Sumatra).

Mr. Williamson has a female from Bangnara, Patani (wing 105 mm.), which is somewhat intermediate between this and the preceding form; but is, on the whole, nearest to the southern race.

***Lanius tigrinus* Drap.**

Lanius tigrinus, Drapiez, Dict. Class. Hist. Nat. xiii, 1828, p. 523 (Java).

Lanius magnirostris, A., p. 203 (Bankasoon); C. i, p. 253 (S. Tenasserim).

Lanius tigrinus, J., p. 184 (Langkawi).

476. *Lanius cristatus cristatus* Linn.

Lanius cristatus, Linn., Syst. Nat. Ed. xii, 1758, p. 93 (Bengal); A., p. 204 (Tavoy to Pakchan); C. i, p. 252 (Tenasserim); E., p. 77 (Patani); F., p. 68 (Trang); K., p. 213 (Tachin).

Otomela cristata, I., p. 41 (Koh Lak).

Lanius cristata cristata, J., p. 184 (Langkawi); L., p. 114 (Ghirbi; Pulo Panjang; Junk Seylon); M., p. 205 (Bangkok).

♀ subad., Koh Rah, Takuapa, P. Siam, 17 Feb. 1919 [No. 4065].

"Iris dark; bill pinkish horn, culmen and tip black; feet greyish black."

Total length 190; wing 86; tail 87; tarsus 20.5; bill from gape 21.5 mm.

This appears to be the common form in the Malay Peninsula where many immature birds occur.

477. *Lanius cristatus superciliosus* Lath.

Lanius superciliosus, Latham, Ind. Ornith. Suppl., 1801, p. xx (Batavia); B., p. 14 (P. Siam); Williamson, Journ. N. H. Soc. Siam, iii, 1918, p. 20 (Bangnara, Patani).

The only occurrences in our area are two males recorded by Mueller, and the pair obtained by Williamson in Patani. These latter, in their bright chestnut upper parts and pure white foreheads and eyebrows, represent the extreme development of the present form or phase. We have two examples from the Malay States resembling them—one from Pahang, the other from Kuala Lumpur.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Lanius cristatus lucionensis Linn.

Lanius lucionensis, Linn., Syst. Nat. Ed. xii, 1766, p. 135 (Luzon); A., p. 205 (Maleoon); C. i, p. 251 (S. Tenasserim); F., p. 69 (Langkawi); J., p. 185 (Langkawi).

There is no record of this form from the Siamese portion of the Peninsula and the specimen we have recorded from Langkawi is a little doubtful. We have one indubitable example (from Kuala Lumpur) with the entire crown grey, changing on the nape into the brown of the back.

Lanius nigriceps longicaudatus Gould.

Lanius longicaudatus, Gould, P. Z. S. 1859, p. 151 (Siam).

Lanius nigriceps, G., p. 149 (Ratburi or Petchaburi).

Lanius nigriceps longicaudatus, K., p. 213 (Tachin); M., p. 205 (Bangkok).

478. Lanius collurioides Less.

Lanius collurioides, Lesson, Voy. Bélang. 1834, p. 250 (Pegu); K., p. 215 (Siam).

Lanius hypoleucus siamensis, Gyldenstolpe, Ornith. Monats. 1916, No. 2, p. 28 (Koh Lak); I., p. 40, pl. 2, fig. 1 (Koh Lak).

ARTAMIDAE.

SWALLOW-SHRIKES.

479. Artamus fuscus Vieill.

Artamus fuscus, Vieillot, Nouv. Dict. d' Hist. Nat. xvii, 1817, p. 297 (Bengal) G., p. 149 (Ratburi or Petchaburi); I., p. 43 (Koh Lak).

♂, 2 ♀. Koh Lak, S. W. Siam, 4-9 April 1919 [Nos. 5018, 5178, 5199].

"Iris dark; bill bluish slate, black at tip; feet powdery black".

Total length ♂, 173; ♀, 166, 172; wing ♂, 123; ♀, 121, 127; tail ♂, 59; ♀, 55, 58; tarsus ♂, 16; ♀, 16, 15; bill from gape ♂, 20; ♀, 23, 21.5 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1893.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

PARIDAE.

TITS.

{ No crest .. .. .	..	..	..	<i>Parus major malayorum</i>
{ A long crest .. .. .	..	..	..	<i>Melanochlora sultanea flavocristata</i>

480. *Parus major malayorum* Rob. & Kloss.

Parus major malayorum, Robinson & Kloss, Journ. F. M. S. Mus. viii, pt. 2, 1918, p. 226 (Korinchi, Sumatra).

Parus cinereus, B., p. 20 (Junk Seylon).

Parus atriceps, E., p. 77 (Patani).

Parus major cinereus, M. 2, p. 74 (Burma to Sunda Islands).

We place the above references with the Sumatran form as their subjects probably agree with birds of the Malay States, which are similar. Possibly birds of S. W. Siam belong to the South Chinese races *P. m. commixtus* Swinhoe, which Hartert states ranges thence to Tenasserim (Nov. Zool. 12, 1915, p. 400).

481. *Melanochlora sultanea flavocristata* Lafr.

Parus flavo-cristatus, Lafresnaye, Mag. Zool., Cl. 2, pl. 80, 1837 (Isles de la Soude).

Melanochlora sultanea, A., pp. 378, 512 (Tavoy to Bankasoon); B., p. 20 (Malay Peninsula); C. i, p. 129 (partim: S. Tenasserim): E., p. 76 (Patani); G., p. 148 (Ratburi or Petchaburi).

Melanochlora flavocristata, F., p. 70 (Trang); H., p. 108 (Bandon).

Melanochlora sultanea flavocristata, L., p. 114 (Glarbi); M. 2, p. 102 (P. Siam and Burma).

2 ♂, ♀, Tapli, Pakehan, P. Siam, 1-5 March 1919 [Nos. 4328-9, 4427].

"Iris dark; bill black; feet greenish slate."

Total length ♂, 188, 195; ♀, 178; wing ♂, 104, 116; ♀, 93; tail ♂, 92, 93; ♀, 82; tarsus ♂, 22, 22; ♀ 21; bill from gape ♂, 18, 16; ♀, 16.5 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

SITTIDAE.

NUTHATCHES.

{ Underparts paler	<i>Dendrophila f. frontalis</i>
{ Underparts darker	<i>D. f. saturata</i>

482. *Dendrophila frontalis frontalis* (Swains.).

Sitta frontalis, Swainson, Zool. Ill. (1) 1820-1, pl. 2 (Ceylon)*; C. i, p. 134 (Tenasserim); M., p. 197 (Tung Song).

Dendrophila frontalis, A., pp. 201, 507 (Tavoy to Bankasoon); B., p. 20 (Junk Seylon).

Dendrophila saturator, H., p. 109 (Bandon).

Sitta frontalis frontalis, M. 2, p. 132, pl. iii (partim: Burma; Siam South to 9° N.).

2 ♀. Tasan, P. Siam, 16 March 1919 [Nos. 4629-30].

1 ♀. Hat Sanuk, S. W. Siam, 12 April 1919 [No. 5259].

"Iris greenish yellow; bill coral, black at extreme tip; feet dark brown."

Total length ♀, 124, 130, 125; wing 72, 73, 73; tail 45, 43, 44; tarsus 15, 15.5, 17; bill from gape 17, 17, 17 mm.

Birds from Java and Annam are inseparable, and are *frontalis* Horsf. and *velata* Temm. (Pl. Col. pl. 72, fig 3): they do not seem to differ from the Ceylon bird.

Lacking Indian material we are not in a position to review this species, but it is possible that in India there are two forms:—a southern, smaller one, *D. f. frontalis* (Swains.), based on birds from Ceylon: a northern, larger one, *D. f. corallina* (Hodgs.), based on birds from the Himalayas (*vide* Sharpe, Stray Feathers, iii, 1875, p. 436).

Then, in the southern half of the Malay Peninsula, occurs a well-marked dark-breasted race, *D. f. saturator* (Hartert): the point where it ceases and meets the paler northern form is indefinite, but birds belong to it at least as far north as Nakorn Sritamarat, Peninsular Siam.

* Has priority over *Sitta frontalis* Horsf., Trans. Linn. Soc. xiii, 1821, p. 162 (Java).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burnah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

The three examples cited here and a Bandon specimen are somewhat intermediate, but nearer *frontalis*; they have a decided wood-brown tinge on the undersurface, differentiating them from Javanese and Annam birds: a few southern Peninsular birds are also of this colour beneath, but of a much deeper, more cinnamomeus, shade tinged with lilac.

483. *Dendrophila frontalis saturator* (Hartert).

Sitta frontalis saturator, Hartert, Nov. Zool. ix, 1902, p. 573 (Gunong Tahan, Pahang-Kelantan Boundary).

Dendrophila saturator, E., p. 76 (Patani); F., p. 70 (Trang).

Sitta frontalis frontalis, M. 2, p. 132, pl. iii (partim: Malay Peninsula south of 9° N.).

This race extends northwards from the Malay States at least as far as Trang and Nakorn Sritamarat, P. Siam, whence we have several examples.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

CORVIDAE

CROWS AND PIES.

1	{ Bill and feet red ; general colour green	<i>Cissa c. chinensis</i>	
	{ Bill and feet not red ; general colour not green .. ..	.. ..	2
2	{ Tail ashy at base ; general colour not black	<i>Dendrocitta rufa</i>	
	{ Tail not ashy at base ; general colour black .. ..	.. ..	3
3	{ With white in the wing	<i>Platysmurus leucopterus</i>	
	{ No white in the wing .. ..	.. ..	4
4	{ Tail much longer than wing ; middle tail-feathers .. ..	.. ..
	{ broadened at tip	<i>Crypsirhina varians</i>	
	{ Tail much shorter than wing ; middle tail-feathers .. ..	.. ..
	{ not broadened .. ..	.. ..	5
5	{ Wing more than 12 inches, breast not grey	<i>Corvus coronoides macrorhynchus</i>	
	{ Wing not more than 11 inches, breast greyish	<i>C. splendens insolens</i>	

484. *Corvus coronoides macrorhynchus* Wagl.

Corvus macrorhynchus, Wagler, ex. Temminck, M. S., Syst. Av. Corvus, 1827, sp. 3 (Java) ; A., p. 380 (Shymotee & Pakchan) ; C. i, p. 397 (Tenasserim) ; E., p. 66 (Patani) ; F., p. 71 (Trang ; Langkawi ; Terutau) ; ? G., p. 148 (Ratburi and Petchaburi) ; H., p. 150 (Bandon ; Koh Samui ; Koh Pennan) ; J., p. 188 (Langkawi & Telibun Islands) ; L., p. 114 (Ghirbi).

Corone enca, D., p. 58 (Patani).

Corvus coronoides andamanensis, Stresemann, Verh. Ornith. Gesellschaft. Bayern, xii, 1916, p. 284 (Tenasserim and Penang).

Corvus coronoides macrorhynchus, Kloss, Journ. Fed. Malay States Mus. x. 1921, p. 223-227 (P. Siam : Pakchan to Terutau I.).

Corvus coronoides macrorhynchus > *andamanensis*, Robinson & Kloss, Journ. Nat. Hist. Soc. Siam, vi, 1923, p. 125 (Bangkok).

2 ♂, 2 ♀. Tapli, P. Siam, 3 March 1919 [Nos. 4345, 4400-2].

"Iris dark ; bill and feet black."

Total length ♂, 520, 487 ; ♀, 457, 468 ; wing ♂, 325, 326 ; ♀, 302, 313 ; tail ♂, 200, 200 ; ♀, 180, 210 ; tarsus ♂, 62, 64 ; ♀, 52, 65 ; bill from gape ♂, 66, 67 ; ♀, 63, 64 mm.

One of us has gone into the question of Malayan crows and finds that all peninsular Siamese birds of this species must be regarded as *C. c. macrorhynchus*. We have seen no material from S. W. Siam.

We feel almost certain that the bird from Bukit Besar, Patani, recorded as *Corvus enca* by Bonhote is wrongly determined and is an example of this species. It is listed with other examples from Pulo

A. Hume & Davison, Stray Feathers, vi, 1873.

B. Müller, Die Ornith. der Insel Sakanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibid, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Bidan off the coast of Kedah, a most unlikely locality for *C. enca* to be found in: this crow is a rare bird in the Peninsula, and when a collection contains three similar examples of the genus the probability is that they belong to the present species.

485. *Corvus splendens insolens* Hume.

Corvus insolens, Hume, Stray Feathers, ii, 1874, p. 480 (Tenasserim); A., p. 380 (Tavoy, Mergui); C. i, p. 399, (Mergui and Siam); Gyldenstolpe, Kungl. S. Vet. Akad. Handl. 50, No. 8, 1913, p. 18 (Bangkok and neighbourhood); Gyldenstolpe, Ibis, 1920, p. 448 ("Siam" ex. coll. Mouhot; also Bangkok).

Corvus splendens insolens, Williamson, Journ. N. H. Soc. Siam, iv, 1920, p. 105 (Petchaburi, *fide* Gairdner; Pran, S. W. Siam); Bulkley, Journ. N. H. Soc. Siam, iv, 1921, p. 195 (Petchaburi); M. 2, p. 35 (Tenasserim; Siam; N. Malay Peninsula).

Though said by Gyldenstolpe to be very common in Bangkok and its neighbourhood during his visits in 1911-1912, Williamson, who has lived in that city for many years, states that he has never seen it there (Journ. N. H. Soc. Siam, i, 1914, p. 76).

486. *Cissa chinensis chinensis* Bodd.

Coracias chinensis, Bodd., Tabl. Pl. Enl. 1873, p. 38 ("China": errore! Southern Siam).

Cissa chinensis, A., pp. 385, 519 (Tavoy); C. i, p. 406 (Tenasserim south to Mergui); G., p. 148 (Ratburi & Petchaburi); M., p. 180 (Petriu & Hup Bon).

1 ♂. Hat Sanuk S. W. Siam, 17 April 1919 [No. 5371].

"Iris crimson; bill and edge of eyelids blood red; feet vermilion."

Total length 398; wing 157; tail 223; tarsus 41; bill from gape 41 mm.

Baker's statement (*loc. cit.*) that *Cissa chinensis minor* (type locality, Sumatra) is the form hitherto accepted as inhabiting Siam is one that we must query; further the Green Hunting Crow was not known from the Malay Peninsula (except Tenasserim) until it was described by Ogilvie Grant as *Cissa robinsoni* (Bull. Brit. Orn. Club,

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

xix, 1906, p. 9; Journ. Fed. Malay States Museums, iii, 1908, p. 16, pl. iii, fig. 1: Gunong Tahan, Pahang) a name no one questioned until we ourselves did so (Journ. F. M. S. Mus. viii, 1918, p. 231).

Baker considers that *C. c. minor* should be suppressed: there is no doubt whatever as to its validity as a subspecies of *C. chinensis*. Among the three names the only question that arises is whether *C. c. robinsoni* is distinct from *C. c. minor*: our own opinion is that it "can only be maintained as a somewhat thin subspecies based on average characters only" (*l. c. s.*).

No question arises, however, as to *minor* and *robinsoni*, with wings not exceeding 140 mm. being distinct from the Hat Sanuk specimen.

We suggest that Mr. Herbert's juvenile female from Hup Bon, S. E. Siam, with "the whole of the underparts a brilliant lemon-yellow," recorded by Baker as an example of this species, is probably an example of *Cissa hypoleuca* Gigl. & Salvad., known hitherto only from Cochin-China and South Annam.

487. *Crypsirhina varians* Lath.

Corvus varians, Lath., Ind. Orn. Suppl., 1801, p. xxvi (Java).

Crypsirhina varians, A., p. 386 (Tavoy to Mergui); C. i, p. 404 (Tenasserim south to Mergui); E., p. 66 (Patani); Williamson, Journ. N. H. Soc. Siam, i, 1914, p. 76 (Koh Lak); I., p. 18 (Koh Lak); K., p. 233 (Koh Lak and Tachin); M., p. 181 (Klong Wang Hip, Tung Song); M. 2, p. 36 (S. Tenasserim; Siam).

♂, ♀. Namchut, Pakchan, P. Siam, 26 Feb. 1919 [Nos. 4242-3].

2 ♂, 8 ♀, 1 sex inc., Koh Lak, S. W. Siam, 3-18 April 1919 [Nos. 4944-5, 4974, 4977-9, 5030, 5308, 5086, 5094, 5373].

"Iris china blue; bill and feet black."

Total length ♂, 335, 288, 322; ♀, 335, 306, 308, 309, 318, 312, 317, 312, 331; wing ♂, 113, 112, 119; ♀, 113, 117, 113, 112, 115, 117, 117, 115, 116; tail ♂, 210, 177, 198; ♀, 212, 198, 188, 199, 190, 198, 193, 180, 193; tarsus ♂, 27, 27, 28.5; ♀, 28, 27, 28,

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, *Ibis*, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

26, 28, 27, 27, 27.5, 26; bill from gape ♂, 26, 28, 26; ♀, 25, 26, 24, 24, 25.5, 24, 25, 21, 24 mm.

We cannot see any difference between Indo-Chinese examples and typical Javanese birds.

488. *Platysmurus leucopterus leucopterus* Temm.

Glaucoptis leucopterus, Temm., Pl. Col. 1824, no. 265 (Sumatra).

Platysmurus leucopterus, A., p. 387 (Tavoy to Malewoon); C. i, p. 408 (South Tenasserim); F., p. 71 (Trang); H., p. 108 (Bandon); L., p. 114 (Ghirbi); M., p. 182 (Klong Bang Lai, Patiyu; Tung Song); M. 2, p. 58 (Tenasserim; S. W. Siam; Malay Peninsula).

Glenargus leucopterus, B., p. 41 (Malay Peninsula).

2 ♂, 2 ♀. Tapli, Pakchan, P. Siam, 6-8 March 1919 [Nos. 4461-2, 4468, 4490].

"Iris crimson; bill and feet black."

Total length ♂, 410, 418; ♀, 396, 388; wing ♂, 192, 193; ♀, 188, 187; tail ♂, 208, 212; ♀, 185, 198; tarsus ♂, 39, 37; ♀, 40, 37; bill from gape, ♂, 41, 40; ♀, 40, 38 mm.

***Dendrocitta rufa* subsp.**

Dendrocitta rufa, A., p. 386 (Tavoy); C. i, p. 402 (Tenasserim south to Mergui); Parrot, Verh. Ornith. Ges. Bayern, viii, 1907, p. 119 (Bangkok)¹.

Dendrocitta rufa saturator, M. 2, p. 51 (Peninsular Siam and Burma).

It is possible that collectors may meet with this bird in Petch-aburi. Two South-eastern forms have recently been described, *D. r. sakaretensis* Gyldenstolpe,² from E. Siam, and *D. r. saturator* Ticehurst,³ from the Kaukareik Hills, Tenasserim.

As we have not seen any examples from Siam or south Tenasserim we are unable to use a subspecific name.

¹ Mr. Williamson informs us that he has never come across this bird in or near Bangkok.

² Bull. B. O. C. xli, 1921, p. 32.

³ Ibis, 1922, p. 538.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

DICRURIDAE.

KING-CROWS OR DRONGOS.

1	{ General colour black	2
	{ General colour greyish indigo (upper parts dark steely slate)	<i>Dicrurus longicaudatus intermedius</i>
	{ General colour grey	6
2	{ Tail square or forked, outer feathers normal	3
	{ Outer tail-feathers much lengthened with naked shafts	8
3	{ A crest of long hairs, wing more than 6 inches, back velvety	<i>D. h. hottentottus</i>
	{ No long hairs on crown, wing less than 6 inches, back glossy or metallic	4
	{ Wing less than 5 inches, plumage largely metallic	<i>Chapitia aenea malayensis</i>
4	{ Wing more than 5 inches, plumage glossy	5
5	{ Outermost tail-feathers exceeding middle pair by less than 1 inch, bill larger	<i>D. annectens</i>
	{ Outermost tail-feathers exceeding middle pair by more than 1 inch, bill smaller	<i>D. macrocercus</i>
	{ A white patch on the sides of the head	<i>D. l. leucogenys</i>
6	{ No white on the head	7
	{ Larger and slightly darker; wing 5.25-5.75 inches, tail 5.5-6.5 inches	<i>D. leucophaeus hopwoodi</i>
	{ Smaller and slightly paler; wing 5.0-5.5 inches, tail 5.0-6.1 inches	<i>D. l. mouthoti</i>
8	{ Outer tail-feather webbed at end on both sides, wing less than 5.5 inches, a slight frontal crest	<i>Bhringa remifer attenuata</i>
	{ Outer tail-feather webbed at end on outer side only, wing more than 5.5 inches, a pronounced frontal crest	<i>Dissemurus paradiseus</i>

489. *Dicrurus annectens* (Hodgs.).

Buchanga annectens, Hodgson, Indian Rev., i, 1837, p. 326, (Himalayas).

Dicrurus annectens, A., pp. 213, 509 (Nwalabo to Malewoon); B., p. 31 (Junk Seylon); C. i, p. 217 (Malewoon); F., p. 73 (Trang); J., p. 186 (Terutau and Telibun Islands); L., p. 115 (Ghirbi; Pulo Panjang; Junk Seylon); Baker, Nov. Zool. xxvi, 1919, p. 42 (Malay Peninsula).

Dicrurus annectens siamensis, M., p. 198 (partim: Tung Song).

Edolius affinis, Blyth, Journ. Asiatic Soc. Bengal, xi, 1842, p. 174 (Malay Peninsula).

♂. Tung Pran, Takuating, P. Siam, 14 Feb. 1919 [No. 3998].

♂ vix ad., ♀. Renong river, P. Siam, 22 Feb. 1919 [Nos.

4152-3].

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salunga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂, ♀, Tasan, Chumporn, P. Siam, 23 March 1919 [No. 4803].

"Iris carmine in adults, reddish brown or dark in younger birds; bill and feet black".

Total length ♂, 275, 285, 262; ♀, 278; wing ♂, 140, 143, 138; ♀, 147; tail ♂, 136, 142, 127; ♀, 132; tarsus ♂, 22, 21.5, 21; ♀, 22; bill from gape ♂, 32, 34, 31; ♀, 31 mm.

Out of the immense series of birds that have passed through our hands in the last fifteen years no one is dated between 20th April and 22nd September, while the bird is always rare in inland districts except for very brief periods in September and October and again in March. In the winter it is always common on small islands in the Straits of Malacca. In the island of Junk Seylon, or Puket, Müller (*loc. cit.*) records it as remaining as late as 18th June, though it did not arrive until 18th November, while Oates says it sweeps through Pegu in October.

490. *Dicrurus macrocercus cathoecus* Swinh.

Dicrurus cathoecus Swinhoe, P. Z. S. 1871, p. 377 (S. China).

Buchanga atra, A., p. 213 (Tavoy to Malewóon)?; C. i, p. 218 (Tenasserim)?

Dicrurus ater, G., p. 148 (Ratburi and Petchaburi)?

Buchanga atra cathoeca, I., p. 20 (Koh Lak); Kloss, Journ. N. H. Soc. Siam. iv, 1920, p. 53 (Koh Lak).

Dicrurus annectens siamensis, K., p. 226 (Koh Lak; Tachin); M., p. 198 (partim: Krabin); Baker, Nov. Zool. xxvi, 1919, p. 42 (Central, South and P. Siam).

Dicrurus ater cathoecus, Baker, Nov. Zool. xxv, 1918, p. 298 (Bangkok).

2 ♂, ♀. Nam Chuk, P. Siam, 25 Feb. 1919 [Nos. 4196, 4224, 4236].

♀. Mamoh, P. Siam, 28 Feb. 1919 [No. 4302].

♂. Koh Lak, Ratburi, S. W. Siam, 3 April 1919 [No. 4976].

"Iris red; bill and feet black".

Total length ♂, 278, 295, 283; ♀, 270, 287; wing ♂, 141, 145, 143; ♀, 133, 138; tail ♂, 152, 154, 148 (110); ♀, 132, 153; tarsus ♂, 22, 22, 23; ♀, 21, 22.5; bill from gape ♂, 28, 23, 30, (app.); ♀ 26, 28 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, *Ibis*, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

These birds are identical with Kloss' type of *D. a. siamensis*. The fact that *cathoecus* and the next subspecies *D. m. thai* occur together at Koh Lak is difficult to explain except on the theory that the latter is a resident while *cathoeca* migrates south to escape the Chinese winter.

In only one specimen of all the series before us is the white rictal spot even faintly indicated.

491. *Dicrurus macrocerus thai* Kloss.

Journ. Fed. Malay States Mus. x, 1921, p. 208 (Koh Lak).

Buchanga atra, A., p. 213 (Tavoy to Malewoon)?; C. i, p. 218 (Tenasserim)?

Dicrurus ater, G., p. 148 (Ratburi and Petchaburi)?

Buchanga atra longus, K., p. 227 (Koh Lak; Tachin); Kloss, Journ. N. H. Soc. Siam, iv, 1920, p. 54 (Annam).

Buchanga atra cathoecus, Robinson & Kloss, Ibis, 1919, p. 611 (S. Annam).

2 ♂, 3 ♀. Koh Lak, S. W. Siam, 1-4 April 1919 [Nos. 4895, 4932, 4975, 5020, 5028].

"Iris dark brown to reddish brown; bill and feet black".

Total length ♂, 275, 296; ♀, 268, 257, 277; wing ♂, 122, 135; ♀, 130, 122, 127; tail ♂, 158 (103), 177 (105); ♀, 154 (105), 140 imp. (107), 163 (100); tarsus ♂, 21, 21; ♀, 19.5, 20, 19; bill from gape ♂, 24, 25; ♀, 23, 25, 25 mm.

This race, which we have seen from S. Tenasserim, S. W. Siam, Central Siam and South Annam, is probably a resident and differs from the last in having a smaller bill and wing; shorter median tail feathers but generally longer outer ones, the tail being thus more graduated and forked.

492. *Dicrurus leucophaeus mouhoti* (Wald.).

Buchanga mouhoti, Walden, Ann. & Mag. Nat. Hist (4) v, 1870, p. 220 (Cambodia).

Buchanga intermedia, Walden (nec Blyth), Journ. Asiat. Soc. Bengal, 1875, Pt. 2, Extra Number, p. 130 (Toung-hoo to Tenasserim).

Buchanga leucophaea, A., p. 216 (Tenasserim town, Malewoon); C. i, p. 221 (partim: smaller birds: Tenasserim, Siam); K., p. 227 (Koh Lak and Lat Bua Khao).

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornithologie der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Buchanga cinerea mouhoti, Robinson, Ibis, 1815, p. 751 (partim : S. Siam) ; I., p. 21 (N. Siam).

Buchanga leucophaea mouhoti, Robinson & Kloss, Ibis, 1919, p. 610 (S. Annam) ; Kloss, Journ. N. H. Soc. Siam, iv, 1920, p. 55 (S. Tenasserim to S. Annam).

Dicrurus leucophaeus disturbans, Baker, Nov. Zool. xxv, p. 293 (Amherst : also Malay Peninsula to Bangkok) ?

Dicrurus leucophaeus nigrescens, Baker, (partim : pale birds) Nov. Zool. xxv, 1918, p. 294 (Bangkok) ?

♂. Koh Lak, S. W. Siam, 5 April 1919 [No. 5064].

♀. Hat Sanuk, near Koh Lak, 14 April 1919 [No. 5277].

♂. Nong Kae, S. W. Siam, 4 Jan. 1918 [Williamson Coll.].

"Iris carmine ; bill and feet black".

Total length, 246, 268, 251 ; wing 126, 134, 131 ; tail 128 ; 133, 140 ; tarsus 16, 19.5, 18 ; bill from gape 24, 29, 25 mm.

493. *Dicrurus leucophaeus hopwoodi* Baker.

Dicrurus leucophaeus hopwoodi, Baker, Nov. Zool. xxv, 1918, p. 294 (Dacca : E. Bengal to Yunnan).

Buchanga leucophaea, C. i, p. 221 (partim ; larger birds : Tenasserim ; Siam).

Buchanga cinerea mouhoti, Robinson, Ibis, 1915, p. 759 (partim : S. Siam).

Buchanga leucophaea hopwoodi, Kloss, Journ. N. H. Soc. Siam, iv, 1920, p. 54 (Tenasserim to E. and S. E. Siam).

♂. Namchut, Pakchan, P. Siam, 24 Feb. 1919 [No. 4197].

♂. Koh Lak, S. W. Siam, 2 Feb. 1917 [Williamson Coll.].

"Iris red ; bill and feet black".

Total length 275, — ; wing 137, 147 ; tail 145, 160 ; tarsus 18, 19 ; bill from gape 27, 28 mm.

This is the larger of the two races of Grey Drongo inhabiting Siam ; we have listed it with some hesitation as *D. l. hopwoodi* Baker, as we think that the author, rather than having remedied the confusion which existed in this group of birds, has increased it.

All the examples we have seen were taken in the winter and, like *D. m. cathoecus*, it possibly comes south for that season.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

494. *Dicrurus longicaudatus intermedius* (Blyth).

Dicrurus intermedius, Blyth, Journ. Asiat. Soc. Bengal, xv, 1846, p. 298 (Penang).

Buchanga intermedia, Walden, P.Z.S. 1866, p. 545 (partim: Penang).

Dicrourus leucophaeus, B., p. 31 (Junk Seylon).

Buchanga longicaudata, C. i, p. 220 (partim: Tongka, i. e., Junk Seylon).

Dicrurus nigrescens, Oates, Fauna Brit. Ind. Birds, i, 1889, p. 315 (partim: Junk Seylon); Robinson & Kloss, Journ. F. M. S. Mus. vi, 1916, p. 242 (Alor Star, Kedah).

Buchanga longicaudata intermedia, L., p. 115 (Pulo Panjang, near Junk Seylon); Kloss, Journ. Nat. Hist. Soc. Siam, iv, 1920, p. 56 (Kedah and Junk Seylon).

We have been able to compare our Kedah and Junk Seylon series with examples of *D. longicaudata* from Dharmsala in the Punjaub and, as suggested elsewhere, find that they are a race of that species: they are distinguished by smaller size (shorter tail and wings) and slightly paler, greyer abdomens. *D. stevensi* Baker (Nepal to the Bhramaputra river) appears to be another subspecies.

495. *Dicrurus longicaudatus nigrescens* (Oates).

Dicrurus nigrescens, Oates, Fauna Brit. Ind. Birds, i, 1889, p. 315 (Rangoon to S. Tenasserim); Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 856 (S. Tenasserim).

Buchanga intermedia (Blyth)? Walden, P. Z. S. 1866, p. 445 (Moulmein).

Buchanga longicaudata, A., p. 213 (Tavoy; Mergui); C. i, p. 220 (partim: Moulmein to Mergui).

Dicrurus leucophaeus nigrescens, Baker (partim dark birds?), Nov. Zool. xxv, 1918, p. 294 (latitude of Bangkok northwards; Central Burma).

Dicrurus leucophaeus disturbans, M., p. 199 (Pak Jong, E. Siam)?

Buchanga longicaudata nigrescens, Kloss, Journ. N. H. Soc. Siam, iv, 1920, p. 56 (Rangoon).

If *D. l. nigrescens* is really separable from *D. l. intermedius* (which we doubt) it is so, apparently, only because of slightly larger size.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

496. *Dicrurus leucogenys leucogenys* Walden.

Buchanga leucogenys, Walden, Ann. & Mag. Nat. Hist. (4) v, 1870, p. 219 (Nagasaki, Japan); A., p. 216 (Mergui to Pakchan); B., p. 31 (Junk Seylon); C. i, p. 228 (S. Tenasserim and Malay Peninsula).

Dicrurus leucogenys, F. p. 72 (Trang); L., p. 115 (Junk Seylon and Pulo Panjang); M., p. 198 (Bangkok and Patiyu).

Dicrurus leucogenys, var. *salangensis*, Reichenow, Nomenc. Mus. Hein. 1890, p. 69 (Junk Seylon).

♂, ♀. Renong River, P. Siam, 21 Feb. 1919 [Nos. 4137-8].

2 ♂. Mamoh, P. Siam, 27-8 Feb. 1919 [Nos. 4293, 4301].

♂, ♀. Namchut, P. Siam, 25 Feb. 1919 [Nos. 4211, 4223].

♂. Tapli, Renong, P. Siam, 2 March 1919 [No. 4336].

"Iris red; bill and feet black".

Total length ♂, 273, 278, 260; ♀, 274, 260, 268, 272; wing ♂, 134, 143, 138; ♀, 144, 131, 138, 141; tail ♂, 138, 149, —; ♀, 148, 135, 140, 138; tarsus ♂, 19.5, 18, 18; ♀, 18, 18.5, 20, 18.5, 21; bill from gape ♂, 30.5, 25, 29; ♀, 28, 28, 28, 26 mm.

This species is said to be based on a bird from Nagasaki, but Uchida and Kuroda (Annot. Zool. Jap. ix, 1906, p. 141, footnote) state that it never seems to have been obtained in Japan. The distribution given by Walden was Malacca, Cambodia, China and Japan: we have only met with it in the Malay Peninsula and Indo-China in the winter months. The migration route is not by sea, as we have never obtained it on the islands off the Peninsula, and it is unknown in Java or Borneo. Bangs and Phillips consider that typical birds belong to a southern, darker form, and have separated the northern birds on the grounds of much paler colour and larger light facial area (*Buchanga leucogenys cerussata*, Bull. Mus. Comp. Zool. Harvard. lviii, 1914, p. 302: Hupeh and Szechuan, type loc. Ichang). Birds collected in the Malay Peninsula and Siam exhibit a considerable range of colour and extent of facial white, but none are so pale as the Szechuan example figured by Backwelder (Report on Zoology; Research in China; Carnegie Inst. Wash. i, pt 2, pl. lxi).

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

497. *Chaptia aenea malayensis* Hay.

Chaptia malayensis, Hay, Blyth, Journ. Asiat. Soc. Bengal, xv, 1846, p. 294 (Malacca).

Chaptia aenea, A., p. 217 (Tavoy); C. i, p. 223 (Tenasserim and Malay Peninsula); I., p. 29 (Tenasserim).

Chaptia aenea malayensis, M., p. 199 (Patiyu).

♂, 2, ♀. Tasan, P. Siam, 16–23 March 1917 [Nos. 4634, 4657, 4813].

“Iris red; bill and feet black”.

Total length ♂, 230; ♀, 225, 228; wing ♂, 117; ♀, 112, 112; tail ♂, 118; ♀, 118, 112; tarsus ♂, 15; ♀, 16, 14; bill from gape ♂, 24; ♀, 23, 22 mm.

498. *Bhringa remifer peracensis* Baker.

Bhringa remifer peracensis, Baker, Bull. Brit. Orn. Club. xxxix, Nov. 1918, p. 18 (Perak mountains).

Bhringa remifer attenuata, Robinson & Kloss, Journ. Fed. Malay States Mus. viii, pt. 2, Dec. 1918, p. 235 (Selangor—Pahang mountains).

Bhringa remifer, A., p. 218 (Amherst); I., P. 22 (N. Siam); Robinson, Ibis, 1915, p. 760 (S. E. Siam).

As this bird has been obtained to the north and south of our area, it will certainly be met within it eventually.

499. *Dissemurus paradiseus paradiseus* (Linn.).

Cuculus paradiseus, Linn., Syst. Nat. i, 1766, p. 172 (Siam).

Dissemurus paradiseus, A., p. 219 (partim: Tavoy to Mergui); C. i, p. 226 (partim); G., p. 148 (Ratburi and Petchaburi).

Dissemurus paradiseus paradiseus, K., p. 228 (Lat Bua Khao); Baker, Nov. Zool. xxv, 1918, p. 300 (partim; Central Siam); Kloss, Journ. N. H. Soc. Siam. iii, 1919, p. 452 (type locality restricted, Bangkok to Ayuthia).

Edolius cristatellus, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 171 (Tenasserim coast)

2 ♂. Koh Lak, S. W. Siam, 4–7 April 1919 [Nos. 5027, 5135].

♀. Hat Sanuk, near Koh Lak, 16 April [No. 5358].

“Iris red; bill and feet black”.

Wing ♂, 153, 162; ♀, 159; tarsus ♂, 27, 26; ♀, 27; bill from gape ♂, 35, 36; ♀, 35 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910–11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Birds from Koh Lak are intermediate between the typical race of Central Siam and the Peninsular form: the present series, however, having fairly well-developed crests, are perhaps nearer *D. p. paradiseus* and we have listed them accordingly.

D. cristatellus from "the Tenasserim coast" might be either *D. p. rangoonensis* (Gould) or the succeeding form; but its description so closely fits birds from Central Siam that it is best ranked as a synonym of the typical race.

500. *Dissemurus paradiseus malayensis* (Blyth).

Edolius malayensis, Blyth, Journ. Asiat. Soc. Bengal. xxviii, 1859, p. 272 (Penang and Andamans).

Dissemurus paradiseus, A., p. 219 (partim: Mergui to Malacca); D., p. 59 (Patelung and Patani); E., p. 68 (partim: Patani); F., p. 71 (partim: Trang); H., pp. 108, 150 (Bandon; Koh Samui; Koh Pennan); L., p. 116 (Ghirbi).

Dissemurus platyurus, B., p. 31 (Junk Seylon).

Dissemurus paradiseus paradiseus, J., p. 187 (Terutau and Lontar Islands); Baker, Nov. Zool. xxv, 1918, p. 300 (partim; extreme south of Siam and Tenasserim).

Dissemurus paradiseus malayensis, Kloss, Ibis, 1918, p. 229 (Koh Lak); id. ib., p. 518 (type locality restricted to Penang); id., Journ. N. H. Soc. Siam, iii, 1919, p. 453 (Mergui to Perak).

2 ♂, ♀. Koh Pipidon, near Junk Seylon, P. Siam, 3-5 Feb. 1919 [Nos. 3926, 3932, 3941].

♂. Tung Pran, Takuapa, P. Siam, 14 Feb. 1919 [No. 4022].

♂, 2 ♀. Koh Yam Yai, Renong, P. Siam, 18 Feb. 1919 [Nos. 4611-2, 4616].

2 ♂. Namehut, Pakchan, P. Siam, 25 Feb. 1919 [Nos. 4212-3].

♂, ♀. Tapli, P. Siam, 5-9 March 1919 [Nos. 4425, 4515].

♂, ♀. Tasan, P. Siam, 22-28 April 1919 [Nos. 4768, 4922].

"Iris red; bill and feet black."

Wing ♂, 154, 152, 150, 148, 146, 148, 155; ♀, 142, 148, 143, 139; tarsus ♂, 29, 23, 24, 25, 22, 23, 30; ♀, 22.5, 25, 24, 23, 23; bill from gape ♂, 39, 33, 32, 27, 32.5, 35, 36.5; ♀, 35, 28, 32, 36, 32 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

This form ranges from South Tenasserim through the Peninsula to about Lat. 4°, beyond which it is replaced by *D. p. platyurus* (Vieill., *cf.* A., pp. 219 – 22).

501. *Dicrurus hottentotus hottentotus* (Linn.).

Corvus hottentotus, Linn., Syst. Nat. i, 1766, p. 155 (type locality Sikkim; *vide* Baker, Nov. Zool. xxvi, 1919, p. 44*).

Chibia hottentotta, A., p. 222 (Mergui; Bopyio); C. i, p. 227 (Tenasserim); Williamson, Journ. Nat. Hist. Soc. Siam. iii, 1918, p. 45 (Meklong and Bangkok).

Chibia hottentotta hottentotta, Kloss, Journ. Fed. Malay States Mus. x, 1921, p. 221-3 (type locality: S. Central Siam)*.

*Failing a type-locality in the original description, subsequent authors have a right to select one: it should, however, be within the bounds of probability. We do not think that a specimen from Sikkim was likely to have come within the experience of Linnaeus.

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| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905. |
| B. Müller, Die Ornis der Insel Salanga, 1882. | F. Robinson and Kloss, Ibis, 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

ORIOLIDAE.

ORIOLES.

1	{ Wings less than 4.25 inches	<i>Oriolus x. xanthonotus</i>	
	{ Wings more than 5 inches .. ..	.. ..	2
2	{ Head and throat pure black	<i>O. x. xanthornus</i> , ♂	
	{ Head and throat not black .. ..	.. ..	3
	{ Yellow coronal patch clear, throat pale yellow .. ..	.. ..	4
3	{ Yellow coronal patch obscure, throat thickly striped with black	<i>O. x. xanthornus</i> , ♀	
4	{ With no indications of dark stripes on abdomen .. ..	.. ..	5
	{ With indications of dark stripes on abdomen .. ..	.. ..	6
	{ Yellow of upper surface bright and clear; slightly larger with coarser bill, black nuchal band broader	<i>O. chinensis indicus</i> , ♂	
5	{ Yellow of upper surface strongly tinged with greenish; slightly smaller with more slender bill, black nuchal band narrower	<i>O. c. tenuirostris</i> , ♂	
	{ Slightly larger, bill coarser; nuchal band broader	<i>O. c. indicus</i> , ♀	
	{ Slightly smaller, bill finer; nuchal band narrower	<i>O. c. tenuirostris</i> , ♀	

502. *Oriolus chinensis indicus* Jerd.

Oriolus indicus, Jerdon, Ill. Ind. Ornith. 1847, pl. 15 (Malabar); A., p. 329 (Tavoy to Malewoon); B., p. 38 (Junk Seylon); C. i, p. 211 (Tenasserim, in winter); F., p. 72 (Trang); G., p. 149 (Ratburi or Petchaburi); I., p. 22 (Koh Lak); J., p. 188 (Pulo Muntia and Lontar, Trang); L., p. 116 (Ghirbi and Pulo Panjang).

2 ♂. Tung Pran, Takuapa, P. Siam, 14 Feb. 1919 [Nos. 4001-2].

2 sex inc. Mamoh, P. Siam, 28 Feb. 1919 [No. 4325].

♀. Namehut, Pakchan, P. Siam, 25-26 Feb. 1919 [Nos. 4219, 4258].

♂. Tasan, Chumporn, P. Siam, 22 March 1919 [No. 4769].

"Iris crimson; bill pinkish horn; feet pale grey or greenish slate".

Total length ♂, 257, 265, 248; ♀ 253; inc. 258, 248; wing ♂, 145, 154, 148; ♀ 152; inc. 148, 147; tail ♂, 103, 103, 97; ♀ 103; inc. 100, 98; tarsus ♂, 25, 26, 24; ♀, 24 inc., 26, 26; bill from gape ♂ 35, 37, 37; ♀ 34; inc. 38, 34 mm.

Apparently a winter visitor to Indo-China and the Malay Peninsula, breeding in summer in China and Mongolia.

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

503. *Oriolus chinensis tenuirostris* Blyth.

Oriolus tenuirostris, Blyth, Journ. Asiat. Soc. Bengal. xv, 1846, p. 48 (Burma); A., p. 329 (Malewoon); C. i, p. 213 (Malewoon).

Oriolus indicus tenuirostris, M., p. 208 (Patiyu).

Not recorded from south of the Isthmus of Kra.

504. *Oriolus xanthornus* (Linn.).

Coracias xanthornus, Linn., Syst. Nat. i, 1758, p. 108 (Bengal).

Sturnus luteolus, Linn., Syst. Nat. i, 1758, p. 167 (Bengal).

Oriolus melanocephalus, Linn., Syst. Nat. i, 1766, p. 160 (Bengal); A., p. 330 (Tavoy to Mergui); B., p. 40 (Junk Seylon); C. i, p. 214 (Mergui northwards); F., p. 72 (Langkawi); G., p. 149 (Rathuri or Petchaburi); I., p. 23 (Koh Lak); J., p. 187 (Trang); L., p. 116 (Ghirbi).

Oriolus melanocephalus himalayanus, K., p. 225 (Koh Lak).

Oriolus luteolus thaiacous, Hartert, Bull. Brit. Orn. Club. xxxviii, 1918, p. 63 (Koh Lak); M., p. 209 (Patiyu).

4 ♂, ♀, ♀ imm. Koh Lak, S. W. Siam, 2-9 April 1919 [Nos. 4929, 5029, 5180, 5188, 5201].

♂. Hat Sanuk, near Koh Lak, 17 April 1919 [No. 5356].

"Iris red; bill pale pinkish horn; feet grey or greenish lead".

Total length ♂, 223, 237, 233, 245, 235; ♀, 227; wing ♂, 133, 133, 130, 136, 142; ♀, 131; tail ♂, 90, 86, 87, 92, 90; ♀, 85; tarsus ♂, 26, 24, 23, 25.5, 23.5; ♀, 22; bill from gape ♂, 33, 32, 33, 34, 34; ♀, 30 mm.

Hartert has separated birds from Koh Lak, S. W. Siam to Kompoungthom, Cambodia, from the Indian form under the name of *O. l. thaiacous*, and examples which we have from the former place agree with his diagnosis.

On the other hand, birds from Trang and South Annam do not appear to differ from the true *xanthornus* (*vide* our remarks in Ibis, 1919, p. 614), so that if *thaiacous* is a valid race it places the other in three isolated areas of distribution. For the present, however, we leave all our synonymy under the specific name, though it is by no means unusual that birds of the southern half of the Malay Peninsula and of Cochin-China are the same, while those of Siam differ and separate them geographically.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fascioli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

505. *Oriolus xanthonotus xanthonotus* Horsf.

Oriolus xanthonotus Horsfield, Trans. Linn. Soc. xiii, 1821, p. 152 (Java); A., p. 930 (Hankachin to Bankasoon); C. i, p. 215 (S. Tenasserim); F., p. 73 (Trang).

2 ♂. Tasan, P. Siam, 15-21 March 1919 [Nos. 4595, 4739].

"Iris red; bill maroon brown; feet greenish slate."

Total length 196, 192; wing 107, 110; tail 75, 77; tarsus 20, 20; bill from gape 25, 26 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

STURNIDAE.

GRACKLES AND STARLINGS.

1	{ With fleshy lappets on the neck	2
	{ No lappets	3
	{ Wing generally more than 6.75 inches, bare portion of cheeks generally divided	<i>Gracula j. javana</i>
2	{ Wing generally less than 6.75 inches, bare portion of cheeks generally continuous	<i>G. j. intermedia</i>
3	{ No bare skin on the sides of the head	4
	{ Eyelids and adjacent areas bare	9
4	{ Bill entirely black	<i>Aplonis panayensis strigatus</i>
	{ Bill not black	5
5	{ A pronounced frontal crest, crown black	6
	{ No frontal crest, crown not black	7
6	{ Back black, bill entirely yellow	<i>Aethiopsar grandis</i>
	{ Back greyish brown, bill yellow with blue base	<i>Ae. fuscus torquatus</i>
7	{ Bill bright yellow at tip, nuchal feathers with white shaft stripes	<i>Sturnia malabarica</i>
	{ Tip of bill not yellow, no pale shaft stripes to nuchal feathers	8
8	{ Tail feathers with pale tips	<i>S. sinensis</i>
	{ Only outer webs of outermost tail-feathers pale	<i>Agropsar sturninus</i>
9	{ Crown and throat bright yellow	<i>Ampeliceps coronatus</i>
	{ Crown and throat not yellow	10
10	{ Crown pale	11
	{ Crown black	12
11	{ Collar and breast black	<i>Graculipica nigricollis</i>
	{ Collar and breast dull pinkish	<i>G. leucocephala</i>
12	{ Ear-coverts black	<i>Acridotheres tristis</i>
	{ Ear-coverts white	<i>Sturnopastor contra floweri</i>

506. *Gracula javana javana* Cuv.

Gracula javana, Cuvier, Regne Anim. 1829, i, p. 377 (Java).

Mainatus intermedius, D., p. 66 (Patani).

Eulabes javanensis, E., p. 66 (Patani); F., p. 67 (Trang); M., p. 209 (Tung Song)?

507. *Gracula javana intermedia* A. Hay.

Gracula intermedia, A. Hay, Madr. Journ. Lit. & Sci. xiii, pt. 2, 1844, p. 157 (N. India: Nepal); C. i, p. 391; Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 437 (Malewoon).

Eulabes javanensis, A., p. 396 (Tenasserim).

Eulabes intermedia, B., p. 36 (Junk Seylon); F., p. 67 (Trang); G., p. 149 (Rathburi & Petchaburi).

Gracula javana intermedia, L., p. 117 (Ghirbi & Junk Seylon).

Eulabes javanensis, M., p. 209 (Patiyu: Maprit & Klong Bang Lai)?

A. Hume & Davison, *Stray Feathers*, vi, 1878.

B. Müller, *Die Ornith. der Insel Salanga*, 1882.

C. Oates, *Birds Brit. Burmah*, Vols. i & ii, 1883.

D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1905.

F. Robinson and Kloss, *Ibis*, 1910-11.

G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.

H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

♂. Hat Sanuk, S. W. Siam, 18 April 1919 [No. 5386].

"Iris dark hazel; lappets rich chrome; bill orange yellow at tip; feet pale chrome."

Total length 275; wing 165; tail 82; tarsus 34; bill from gape 35 mm.

508. *Gracula javana* subsp.

Eulabes javanensis, F., p. 67 (Langkawi).

Eulabes intermedius, H., p. 150 (Koh Samui & Koh Pennan).

Gracula javana javana, J., p. 185 (Langkawi; Pulo Muntia; Pulo Lontar).

1 ♀, 1 ♀ imm. Tung Pran, P. Siam, 13 Feb. 1919 [Nos. 3974-5].

♂. Koh Yam Yai (Sugar Loaves Is.), off Takuapa, P. Siam, 18 Feb. 1919 [No. 4114].

♂, ♀. De Lisle I., P. Siam, 19 Feb. 1919 [Nos. 4123-4].

Soft parts as in *G. j. intermedia*.

Total length ♂, 303, 313; ♀, 268, 296 imm., 291; wing ♂, 176, 177; ♀, 158, 163 imm., 165; tail ♂, 83, 94, ♀, 87, 88 imm., 87; tarsus ♂, 38, 37; ♀ 38, 36 imm., 35; bill from gape ♂, 37, 40; ♀, 39, 39 imm., 38 mm.

Our very large series shows that all northern mainland birds as far south as Trang, and including those from Junk Seylon, have nothing in common with *G. j. javana* from the south of the Peninsula, which ranges northwards as far as Trang in which state typical specimens of both forms occur.

The status of birds from the islands on the coasts of Peninsular Siam, both east and west, is very variable, and specimens occur which can without doubt be assigned to either form or to neither. On the whole, birds from Koh Pennan, Pulo Lontar, Koh Muk, Pulo Terutau and Pulo Langkawi are nearest to *G. j. javana*; those from Koh Samui are very near *G. j. intermedia* as are also, but less defined, those from Takuatung.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

The question of the various races of this genus has been discussed at great length by various authors, notably Finsch (Notes Leyden Museum. xxi, 1899, pp. 1–22 pts. 1–2) and Stresemann (Nov. Zool. xix, 1912, pp 312–313). As regards the mainland distribution of the forms with which we are now dealing, our conclusions conform to those of the latter author. We are not prepared to give a name to the island birds. As a matter of geography the islands are in or near the border line of the two races, and their inhabitants may owe their indeterminate characters to hybridism, the species being one which is a favourite cage bird and the human inhabitants of the islands being of more roving habits than those of the mainland.

On the other hand, birds from the Johore Archipelago, which are in communication with a mainland inhabited by *G. j. javana* only, confirm closely to that bird.

We use the name *intermedia* for convenience and do not imply that the birds here dealt with are necessarily strictly conspecific with the original type which came from the Himalayas (*cf.* Hay. Ibis, 1871, p. 176).

509. *Aplonis panayensis strigatus* (Horsf.).

Turdus strigatus, Horsf., Trans. Linn. Soc. xiii, 1821, p. 148 (Java).

Calornis chalybaeus, A., p. 394 (Tavoy to Malewoon); B., p. 35 (Junk Seylon); C. i, p. 390 (S. Tenasserim); D., p. 66 (Patani); E., p. 67 (Patani); F., p. 68 (Trang); H., p. 151 (Koh Pennan & Koh Samui).

Aplonis panayensis strigatus, J., p. 185 (Lem Pia, Trang); L., p. 117 (Ghirbi; Pulo Panjang).

♂, ♀. Koh Pipidon, P. Siam, 5 Feb. 1919 [Nos. 3936–7].

♂, ♀. Fangnga River, P. Siam, 11 Feb. 1919 [Nos. 3952–3].

♂. Mamoh, Pakchan, P. Siam, 25 Feb. 1919 [No. 4321].

“Iris red; bill and feet black”.

Total length ♂, 215, 200, 203; ♀, 196, 209; wing ♂, 104, 95, 98; ♀, 95, 96; tail ♂, 75, 68, 67; ♀, 63, 70; tarsus ♂, 24, 21, 23; ♀, 22.5, 23; bill from gape ♂, 26, 23, 26; ♀, 25, 22 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910–11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Birds of the Malay Peninsula and Tenasserim are intermediate between the smaller Javanese and the larger Tipperah race, *A. p. affinis* Hay (cf. Stresemann, Nov. Zool. xx, 1913, p. 376); they should perhaps be indicated as *A. p. strigatus* > *affinis*.

510. *Sturnia sinensis* (Gm.).

Oriolus sinensis, Gm., Syst. Nat i, 1788, p. 394 (China).

Sturnia sinensis, G., p. 149 (Ratburi & Petchaburi); I. i., p. 25 (Koh Lak).

Williamson has a series of this species from Petchaburi, Nong Kae and Koh Lak in S. W. Siam, and from Huey Sak, Peninsular Siam: some of them are strongly washed with salmon, others entirely lack this colour.

***Sturnia malabarica malabarica* (Gm.).**

Turdus malabaricus, Gm., Syst. Nat. i, 1788, p. 816 (Malabar).

Sturnia malabarica, A., p. 389 (Mergui); C. i, p. 387 (Malewoon).

This race may occur in our area, as it has been recorded from South Tenasserim. Hume and Davison's Mergui specimens had rich rufous underparts and no trace of any white feathers in the wing; and Oates' Malewoon examples had deep ferruginous underparts; and winglet and primary coverts black.

511. *Sturnia malabarica nemoricola* Jerdon.

Sturnia nemoricola, Jerdon, Ibis, 1862, p. 22 (Upper Burma).

2 ♀. Koh Lak, S. W. Siam, 6 April 1919 (Nos. 5111, 5217).

"Iris bluish white or grey; bill yellow at tip, blue at base; feet yellow".

Total length 187, 185; wing 106, 95; tail 65, 63; tarsus 23, 23; bill from gape 23.5, 22 mm.

Besides the above specimens, we have seen two more of Williamson's from Nong Kae, S. W. Siam. In one of these the winglet is white, in one black. The primary coverts vary from white, black and white, to black; but there is always some white on the wing.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

512. *Agropsar sturnina* (Pall.).

Gracula sturnina, Pallas, Reis. Russ. Reichs. 1776, p. 695 (Dauria).
Sturnia sturnina, A., p. 393 (Tavoy, Mergui); C. i, p. 383 (Tenasserim).

Mr. Williamson informs us that he has a note of a male collected by Mr. C. J. Aagard at Bangnara, Patani. Peninsular Siam, on 2nd November 1916.

513. *Ampeliceps coronatus* Blyth.

Ampeliceps coronatus, Blyth, Journ. Asiat. Soc. Bengal, xi, 1842, p. 194 (Tenasserim); A., p. 398 (Tavoy); B., p. 36 (Junk Seyond); F., p. 68 (Trang); L., p. 117 (Ghirbi); M., p. 211 (Patiyu); Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 856 (S. Tenasserim).

514. *Graculipica leucocephala* (Gigl. & Salvad.).

Acridotheres leucocephalus, Gigl. & Salvad., Atti R. Acad. Torino, v, 1870, p. 273 (Saigon, Cochin China: also Siam).

Sturnia incognita, Hume, Stray Feathers, viii, 1879, p. 396 (between the Tenasserim frontier and Bangkok); id. op. cit. ix, 1880, p. 295 (between Tavoy and the Siamese frontier).

Sturnia leucocephala, C. i, p. 387 (Tavoy-Siamese hills).

Spodiopsar leucocephalus, I., p. 24 (Koh Lak).

Graculipica leucocephala, K., p. 223 (Koh Lak).

1 ♂. Koh Lak, S. W. Siam, 9 April 1919 (No. 5280).

"Bill orange, tomia greenish, black towards gape; orbits black; feet orange yellow".

Total length 240; wing 127; tail 78; tarsus 35; bill from gape 30 mm.

We have before us a series of thirteen birds from S. W. Siam, E. Siam and South Annam. The individual variation in each place is enormous and we feel quite unable to recognise as distinct races:—

Sturnia incognita Hume. Tenasserim.

Poliopsar cambodianus Sharpe. Cambodia,

Poliopsar leucocephalus annamensis Wells. Nhatrang, S. Annam.

515. *Graculipica nigricollis* (Payk.).

Gracula nigricollis, Paykull, Stockholm Acad. Handl. xxviii, 1807, p. 291, t. ix (Canton).

Graculipica nigricollis, G., p. 149 (Ratburi and Petchaburi); K., p. 224 (Koh Lak); Williamson, Journ. N. H. Soc. Siam, i, 1915, p. 204 (Koh Lak).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Birmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Gracupica nigricollis, Humé, Stray Feathers ix, 1880, p. 288 (Tenasserim river; Bangkok).

2 ♂. Koh Lak, S. W. Siam, 4 April 1919 (Nos. 5032-3).

"Iris white; orbital skin chrome yellow; bill black; feet ivory".

Total length 275, 272; wing 156, 158; tail 94, 92; tarsus 39.5, 40; bill from gape 35, 36 mm.

516. *Acridotheres tristis tristis* (Linn.).

Paradisea tristis, Linn., Syst. Nat. i, 1766, p. 167 (Philippines).

Acridotheres tristis, A., p. 388 (Tavoy, Mergui); C. i, p. 380 (Tenasserim); G., p. 149 (Ratburi, Petchaburi); I., p. 27 (Koh Lak); K., p. 225 (Tachin & Koh Lak); M., p. 212 (Bangkok); Williamson, Journ. N. H. Soc. Siam, i, 1915, p. 205 (Koh Lak).

3 ♂. Nam Chut, P. Siam, 24-25 Feb. 1919 [Nos. 4198-9, 4233].

"Iris whitish; orbital skin chrome; bill yellow, base of lower mandible black; feet yellow."

Total length 237, 257, 258; wing 132, 136, 138; tail 88, 93, 88; tarsus 35, 40, 39; bill from gape 31, 31, 36 mm.

517. *Aethiopsar fuscus torquatus* (Davison).

Acridotheres torquatus, Davison, Ibis, 1892, p. 102 (Pahang).

Acridotheres fuscus, A., p. 388 (Tavoy & Mergui); C. i, p. 380 (Tenasserim); D., p. 66 (Patalung).

Aethiopsar fuscus, E., p. 67 (Patani); F., p. 68 (Trang).

Though we secured no examples ourselves, we have been able to inspect a series obtained by Mr. Williamson at Huey Sak, Peninsular Siam. These are the same as birds from the Malay States and must therefore be called *A. f. torquatus* Davison. We have examined the type of the latter from Pahang and, though in moult and otherwise somewhat abnormal, it is indubitably an example of this species. The Malayan form, however, is distinguished from *A. f. fuscus* Wagl., (type locality here restricted to Nepal) by smaller size; the wings of Nepal birds range from 122 to 128 mm. (average 125); of Malay States birds from 112 to 121 mm. (average 116.5 :

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

fifteen specimens examined). The wings of the five Siamese specimens before us are from 114 to 122 mm. Baker (Bull. Brit. Orn. Club, xxxviii, 1918, p. 70) is of opinion that *grandis* is a race of *fuscus*. With this conclusion we cannot agree on account of the characters of the birds themselves: further, the two seem to occur together in at least one area, i. e., Tenasserim and the north of the Malay Peninsula.

In our opinion two species of *Aethiopsar* are involved here:—

- (1) *fuscus*, with subspecies *fuscus*, *mahrattensis*, *torquatus*,
- (2) *grandis*, with subspecies *grandis*, *javanica*.

The former is characterised by the blue base of the mandible, which in *grandis* is yellow.

A third Indo-Chinese species, with the base of the bill red, is *crisatellus* with subspecies *crisatellus*, *albocinctus*, *brevipennis*. While the first two species have white under tail-coverts, in the last these are black, merely tipped with white.

Where *Ae. infuscatatus* Baker (*Ae. fuscus infuscatatus*, l. c. s.) comes we are unable to say from the description given.

518. *Aethiopsar grandis grandis* (Moore).

Acridotheres grandis, Moore, Horsf. & Moore, Cat. Birds Mus. E. I. C. ii, 1854, p. 537 (Sumatra: *errone*. Substitute Tenasserim, *fide* Baker).

Acridotheres siamensis, Swinh., P. Z. S. 1863, p. 303 (Siam); C. i, p. 381 (Karenni).

Aethiopsar grandis, G., p. 149 (Ratburi & Petchaburi); I., p. 26 (Koh Lak); K., p. 224 (Koh Lak); Williamson, Journ. N. H. Soc. Siam, i, 1915, p. 205 (Koh Lak).

Aethiopsar fuscus grandis, M., p. 212 (Samkok; Bangkok; Meklong).

1 ♂, 2 ♀. Koh Lak, S. W. Siam, 6–10 April 1919 [Nos. 5108, 5237–8].

"Iris, outer ring black, inner brown; bill orange or yellow; feet pale yellow".

Total length ♂, 243; ♀ 240, 243; wing ♂, 130; ♀, 126, 122; tail ♂, 78; ♀, 75, 78; tarsus ♂, 37, 37.5; bill from gape ♂, 31; ♀, 29.5, 30 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910–11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

519. *Sturnopaster contra floweri* Sharpe.

Sturnopaster floweri, Sharpe, Bull. Brit. Orn. Club, vii, 1897, p. xvii, (Pachim and Tabkamen, West Central Siam); Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 50, No. 8, 1913, p. 37 (Bangkok); I., p. 25 (Koh Lak).

Sturnopaster superciliaris, G., pp. 33, 149 (Petchaburi); Williamson, Journ. N. H. Soc. Siam, i, 1915, p. 206 (Bangkok & Koh Lak).

Sturnopaster superciliaris floweri, K., p. 225 (Tachin).

Sturnopaster contra floweri, M., p. 212 (Bangkok).

Gyldenstolpe states (I., p. 25) that *S. c. superciliaris* is found in N. Siam: we have not seen any South Tenasserim specimens, but skins from Tavoy to Mergui are determined by Hume (A., p. 387), Oates (C. i, p. 378) and Sharpe (Cat. Birds Brit. Mus., xiii, p. 59, pl. v, fig. 2) as *S. c. superciliaris* Blyth (Journ. Asiat. Soc. Bengal, xxxii, 1863, p. 77. Rangoon, *vide* Baker). This Burmese form differs from *S. c. floweri* in having the mantle and back brown, not black; the abdomen vinaceous-grey, not white.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, *Ibis*, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, *op. cit.*, iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

FRINGILLIDAE.

SPARROWS.

1	{ Sides of body streaked	..	..	..	..	..	2
	{ No streaks on flanks	..	..	..	..	..	3
2	{ A large distinct white patch on the outermost tail-feathers	..	..	..	..	<i>Emberiza aureola</i>	
	{ No distinct patch on the outermost tail-feathers	..	..	..	..	<i>E. rutila</i>	
3	{ Underparts yellow	..	..	..	..	<i>Passer flaveolus</i>	
	{ Underparts drabby	..	..	..	..	<i>P. montanus malaccensis</i>	

520. *Passer montanus malaccensis* Dub.

Passer montanus malaccensis, Dubois, Faun. Vert. de la Belgique, Oiseaux, i, 1887, p. 574 (Malacca).

Passer montanus, A., p. 407 (Tavoy to Pakchan); B., p. 34 (Junk Seylon); C. i, p. 348 (Tenasserim).

Passer montanus saturata, M., p. 412 (Bangkok).

521. *Passer flaveolus* Blyth.

Passer flaveolus, Blyth, Journ. Asiat Soc. Bengal. xiii, 1844, p. 946 (Arracan) Williamson, Journ. N. H. Soc. Siam. ii, 1917, p. 196 (Bangkok); id. op. cit. iii, 1918, p. 44 (S. W. Siam).

♂, 2 ♀. Mamoh, P. Siam, 26-28 Feb. 1919 [Nos. 4277, 4303-4].

6 ♂, 4 ♀. Koh Lak, S. W. Siam, 3-10 April 1919 [Nos. 5006 5012-4, 5039-40, 5081, 5090, 5240-1].

"Iris dark, black (males), pale horn (females); feet olive brown."

Total length ♂, 148, 153, 152, 151, 151, 151, 143; ♀, 138, 143, 140, 144, 148, 148; wing ♂, 70, 71, 73 75, 71, 74, 73; ♀, 70, 68, 70, 68, 68, 71; tail ♂, 60, 58, 69, 58, 58, 62, 64; ♀, 57, 57, 55, 57, 60, 60; tarsus ♂, 19.5, 18, 18, 20, 20, 18, 19; ♀, 18.5, 19, 19, 18, 19, 20; bill from gape ♂, 13, 12, 13, 14.5, 12, 14.5, 13; ♀, 14, 13, 12, 14, 14, 14 mm.

522. *Emberiza aureola* Pall.

Emberiza aureola, Pallas, Reise. Russ. Reichs, ii, 1773, p. 711 (Siberia); E., p. 70 (Patani).

Euspiza aureola, A., p. (Tavoy to Pakchan).

Hypocentor aureolus, B., p. 34 (Junk Seylon).

Emberiza rutila Pall.

Emberiza rutila, Pallas, Russ. Reichs, iii, 1776, p. 698 (Mongolia); G., p. 149 (Ratburi, vide Williamson, Journ. Nat. Hist. Soc. Siam. iii, 1918, p. 22).

This species may occur.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciuli Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

PLOCEIDAE.

WEAVER-BIRDS AND MUNIAS.

1	{ Wing more than 2.4 inches	2
	{ Wing less than 2.4 inches	3
2	{ Breast plain	<i>Ploceus passerinus infortunatus</i>
	{ Breast striped	<i>P. manyar flaviceps</i>
3	{ Back and wings green	<i>Erythrura prasina</i>
	{ Back and wings not green	4
4	{ Back not striped	5
	{ Back with pale shaft-stripes	6
5	{ Head and throat white	<i>Munia maja</i>
	{ Head, throat and breast black	<i>M. atricapilla</i>
6	{ A white rump-patch	<i>M. a. acuticauda</i>
	{ No rump patch	7
7	{ Breast and flanks blackish brown	<i>M. l. leucogastra</i>
	{ Breast and flanks banded brown and white	<i>M. punctulata subundulata</i>

Ploceus manyar flaviceps Less.

Ploceus flaviceps, Lesson, Traité d'Orn., 1831, p. 435 (Pondicherry).

Ploceus manyar, Williamson, Journ. N. H. Soc. Siam. ii, 1917, p. 192 (Bangkok).

Compared with a typical series from Java, Siamese birds are less brightly coloured and should, therefore, be recorded as above. The species has not been met with in the Peninsula.

523. Ploceus passerinus infortunatus Hartert.

Ploceus passerinus infortunatus, Hartert, Nov. Zool. ix, 1902, p. 577 (Kelantan).

Ploceus baya, A., p. 398 (Tavoy, Mergui); C. i, p. 358 (Tenasserim).

Ploceus atrigula, E., p. 69 (Patani).

Ploceus megarhynchus, G., p. 149 (Ratburi or Petchaburi).

Ploceus megarhynchus infortunatus, L., p. 117 (Pulo Panjang).

Ploceus philippinus infortunatus, M., p. 411 (Meklong).

Ploceëlla javanensis chrysea Hume.

[*Ploceëlla*] *chryseus*, Hume, Stray Feathers, vi, 1878, p. 399, note (Burma, i. e. Tenasserim).

Ploceëlla javanensis, C. i, p. 362 (Siam); Sharpe, Cat. Birds Brit. Mus., xiii, 1890, p. 474 (Tavoy; Siam); Oates, Fauna Brit. India, Birds ii, 1890, p. 180 (Siam).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.

56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

The Tavoy specimen is a juvenile female (*vide* Sharpe) and is probably recorded by Hume and Davison under *Ploceus baya* (A. p. 398). The bird from Siam recorded by Sharpe (an adult male) was obtained by Schomburgk, and Mr. Williamson informs us that he has procured many breeding specimens of both sexes, with nests and eggs, from the neighbourhood of Sam Kok, about 40 miles north of Bangkok.

In spite of the record from Tavoy, the possible occurrence of this species in our area is so doubtful that we have not entered it in our "key."

524. *Munia maja* (Linn.).

Loxia maja, Linnaeus, Syst. Nat. 1766, p. 301 (Malacca).

Munia maja, D., p. 67 (Patani); E., p. 69 (Patani).

525. *Munia atricapilla* (Vieill.).

Loxia atricapilla, Vieillot, Ois. Chant. 1805, p. 84, pl. 53 ("Les Grandes Indes": here restricted to Lower Bengal).

Munia rubronigra, A., p. 401 (Mergui).

Amadina atricapilla, C. i, p. 366 (Tenasserim).

Munia atricapilla atricapilla, M., p. 411 (Meklong).

3 ♂, 4 ♀. Koh Lak, S. W. Siam, 4-10 April 1919 [Nos. 5022-26, 5226-7].

"Iris dark; bill pale bluish grey; feet slate".

Total length ♂, —, 118, 118, ♀, 125, 117, 112, 122; wing ♂, 53, 54, 53; ♀, 53, 53, 52, 56; tail ♂, —, 40, 38; ♀, 42, 38, 38, 43; tarsus ♂, 16, 16, 15; ♀, 16, 16, 16, 14; bill from gape ♂, 11, 11, 10; ♀, 10, 11, 11.5, 11 mm.

In colour these birds are a rich chestnut, with the median abdomen and under tail-coverts black or much blackened, except for one female which is only just tinged with black in those parts. It is probable that they belong to the Indian race and not to the Himalayan form *M. a. rubroniger* Hodgs., though they are as large as Nepal birds (12 specimens, wings 53-56 mm: *vide* Scully, Stray Feathers, viii, p. 322). Baker says (*l. c. s.*) that the great majority of birds from Central and S. W. Siam are much nearer *atricapilla* than *rubroniger*.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonholc, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

Besides the above series we have seen three specimens from Patani.

526. *Munia punctulata subundulata* Godw.-Aust.

Munia subundulata, Godwin-Austen, P. Z. S. 1874, p. 48 (Manipur).

Munia superstriata, Hume, Stray Feathers, ii, 1874, p. 481 (Tavoy); A., p. 402 (Tavoy).

Amadina punctulata, C. i, p. 368 (Tavoy).

Munia punctulata subundulata, I., p. 28 (Koh Lak).

4 ♂, 2 ♀. Koh Lak, S. W. Siam, 2-10 April 1919 [Nos. 4952, 5073, 5221, 5228-30].

"Iris dark; bill slate, culmen darker; feet slate."

Total length ♂, 122, 125, 133, 118; ♀, 115, 114; wing ♂, 55, 53, 57 53; ♀, 48, 51; tail ♂, 40, 48, 52, 40; ♀, 38, 38; tarsus ♂, 15.5, 13, 14.5, 14.5; ♀, 14, 14.5; bill from gape ♂, 12, 11, 12, 11; ♀, 11, 10 mm.

527. *Munia acuticauda acuticauda* Hodgson.

Munia acuticauda, Hodgson, Asiat. Res. xix, 1836, p. 153 (Nepal);

A., pp. 403, 520 (Tavoy to Malewoon); E., p. 69 (Patani); H., p. 151 (Bandon, Koh Samui, Koh Pennan).

Uroloncha acuticauda, B., p. 35 (Junk Seylon).

Amadina acuticauda, C. i, p. 364 (S. Tenasserim).

2 ♂. Tapli, Pakchan, P. Siam, 9 March 1919 [Nos. 4530-1].

♂. Tasan, Chumporn, P. Siam, 28 March 1919 [No. 4916].

"Iris dark; maxilla black, mandible grey, feet greyish".

Total length 110, 118; wing 47, 48; tail 42, 48; tarsus 12, 13; bill from gape 10, 11 mm.

528. *Munia leucogastra leucogastra* (Blyth).

Amadina leucogastra, Blyth, Journ. Asiatic Soc. Bengal, xv, 1846, p. 286, footnote (Malacca).

Munia leucogastra, A., p. 402 (Choungthanoung to Malewoon).

Amadina leucogastra, C. i, p. 367 (S. Tenasserim).

Uroloncha leucogastra, Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 856 (Tavoy southwards).

♀. Mamoh, Pakchan, P. Siam, 27 Feb. 1919 [No. 4289].

2 ♀, Tasan, P. Siam, 23-29 March 1919 [Nos. 4806, 4915].

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

"Iris brown; maxilla black, mandible slaty or grey; feet slaty or grey".

Total length 106, 102; wing 48, 50; tail 40, 40; tarsus 14, 13; bill from gape 10, 11 mm.

529. *Erythrura prasina* (Sparrm.).

Loxia prasina, Sparrman, Mus. Carls. ii, 1788, pls 72, 73 (Java).

Erythrura prasina, A., p. 405 (Bokpyin to Malewoon); C. i, p. 370 (S. Tenasserim).

10 ♂, 15 ♀. Tasan, Chumporn, P. Siam, 13-29 March 1919 [Nos. 4556-8, 4645-6, 4661-3, 4685, 4700, 4710-1, 4743, 4761-4 4775-7, 4799, 4800, 4840, 4681-2, 4902, 4920].

"Iris dark; bill black; feet pinkish fleshy".

Total length ♂, 153, 142, 150, 153, 149, 142, 148; ♀, 123; 128, 126, 125, 125, 135, 127, 128, 133, 128, 122, 120, 138; wing ♂, 60, 60, 59, 58, 58, 60, 59; ♀, 58, 54, 57, 59, 62, 60, 58, 57, 60, 57, 60, 58, 58; tail ♂, 67, 58, 62, 65, 63, 60, 65; ♀, 42, 43, 40, 38, 42, 48, 48, 48, 45, 40, 38, 38, 48; tarsus ♂, 14.5, 16, 14, 16, 15.5, 15, 15; ♀, 14.5, 14, 15, 15, 15, 14, 15, 15, 14, 14.5, 15, 14, 14.5; bill from gape ♂, 13, 15, 14, 15, 15, 15, 15; ♀, 14, 13.5, 14, 14, 14, 14, 14.5, 14, 14, 14, 14.5, 14. 14 mm.

A young male is like the females but with a few spots of red on the lower breast. An adult male [No. 4645] has the upper tail coverts and the centre of the abdomen bright yellow instead of red: this abnormality is not uncommon.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

MOTACILLIDAE.

WAGTAILS AND PIPITS.

1	{ Upper side plain	2
	{ Upper side streaked with blackish	8
2	{ Hind claw longer than hind toe	3
	{ Hind claw shorter than hind toe	5
3	{ Supercilium absent or very small	<i>Motacilla flava borealis</i>
	{ A long broad supercilium	4
4	{ Supercilium white, crown grey	<i>M. f. simillima</i>
	{ Supercilium yellow, crown tinged with olive	<i>M. f. taivana</i>
5	{ No black gorget, underside yellow	<i>M. cinerea caspica</i>
	{ A black gorget, underside white	6
6	{ Upperside brownish olive, two black bands on breast	<i>Dendronanthus indicus</i>
	{ Upper parts grey or black, a single black band on breast	7
7	{ Greater wing-coverts merely margined with white, back always grey	<i>M. alba dukhunensis</i>
	{ Greater wing-coverts with the outer webs entirely white, back grey in winter, black in summer	<i>M. a. leucopsis</i>
8	{ Upperside suffused with green, dark markings slight	<i>Anthus trivialis hodgsoni</i>
	{ Upper plumage brown, dark markings pronounced	9
9	{ Sides of body coarsely streaked with brown	<i>A. cervinus</i>
	{ Flanks not or scarcely streaked	10
10	{ Wing less than 3.4 inches	<i>A. richardi malayensis</i>
	{ Wing more than 3.3 inches	11
11	{ Hind claw 0.4—0.6 inches, little longer than hind toe	<i>A. r. striolatus</i>
	{ Hind claw 0.6—0.85 inches, much longer than hind toe	<i>A. r. richardi</i>

530. *Motacilla flava borealis* Sundev.

Motacilla flava var. 3 *borealis*, Sundevall, Kungl. Sv. Vetens Handl. 1840, p. 33 (Lapland).

Budytes cinereocapilla, A., p. 363 (Tavoy)?

Budytes viridis, C. i, p. 161 (Tavoy).

Motacilla borealis, E., p. 71 (Patani); F., p. 73 (Trang; Kosoom; Patani).

In our experience this bird is much less common than the next throughout the Malay Peninsula, and in Bangkok it is also less numerous.

531. *Motacilla flava simillima* Hartert.

Motacilla flava simillima, Hartert, Vog. Pal. Faun., 1905, p. 289 (Kamtschatka); L., p. 117 (Ghirbi).

Budytes flava, A., p. 364 (Mergui to Bankasoon); C. i, p. 162 (S. Tenasserim).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♂. Tapli, Pakchan, P. Siam, 9 March 1919 [No. 4525].

♂. Koh Lak, S. W. Siam, 7 April 1919 [No. 5140].

"Iris dark; bill black, base of mandible pale; feet blackish."

Total length 170, 176; wing, 82, 83; tail 74, 78; tarsus 24, 27; bill from gape 17, 16 mm.

532. *Motacilla flava taivana* (Swinh.).

Budytes taivanus, Swinhoe, P. Z. S. 1863, p. 334 (Formosa); C. i, p. 162.

Motacilla flava taivanus, I., p. 32 (Koh Lak).

Not a common bird in the Peninsula. We have three specimens from Kuala Lumpur and have seen another three from Bangkok (Williamson Coll.).

533. *Motacilla cinerea caspica* (S. G. Gmelin).

Parus caspicus, S. G. Gmelin, Reise durch Russland, iii, 1774, p. 104, taf. 20, fig. 2. (Enzeli, Caspian Sea).

Motacilla melanope, Pall. et auctt.; F., p. 73 (Trang).

Calobates melanope, A., p. 362 (Mergui to Bankasoon); C. i, p. 159; (Tenasserim).

Motacilla sulphurea, B., p. 9 (Junk Seylon).

3 ♀. Tasan, P. Siam, 21-28 March 1919 [Nos. 4751, 4801, 4910].

"Iris dark; bill greyish horn; feet fleshy brown."

Total length 183, 195; wing 79, 80; tail 90, 97; tarsus 19.5, 20; bill from gape 18, — mm.

The commonest wagtail in the southern part of the Peninsula. Pallas' name for it is two years later than that of Gmelin.

***Motacilla alba* Linn. subsp. *dukhunensis* Sykes?**

Motacilla dukhunensis, Sykes, P. Z. S. 1832, p. 91 (Dekkan, India).

Motacilla leucopsis, Williamson, Journ. Nat. Hist. Soc. Siam, ii, 1917, p. 200 (Bangkok).

Motacilla alba, Oates, Fauna Brit. India, ii, 1890, p. 287.

A single example of *M. alba alba* type has been obtained in Bangkok (29 Jan. 1914) by Williamson. It is the only local specimen we have seen and, no doubt, belongs to the eastern race. The winter range probably extends to S. W. Siam.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Motacilla alba leucopsis Gould.

Motacilla leucopsis, Gould, P. Z. S. 1837 p. 78 (India); Sharpe, Cat. Birds, x, 1885, p. 482 (Tavoy); Oates, Fauna Brit. India, ii, 1890, p. 289.

Williamson obtained examples of this race in Bangkok on 7th March 1918, and 14th November 1923. It may, therefore, be expected to occur in S. W. Siam.

534. Dendronanthus indicus (Gm.).

Motacilla indica, Gmelin, Syst. Nat. i. 1788, p. 962 (India).

Limomidromus indicus, A., pp. 364, 519 (Tavoy to Malewoon); C. i, p. 164 (Tenasserim); E. p. 73 (Trang).

Dendronanthus indicus, L., p. 118 (Ghirbi and Junk Seylon).

2 ♂. Tung Pran, P. Siam, 14 Feb. 1919 [Nos. 3979, 4019].

♂. Koh Rah, Takuapa, P. Siam, 17 Feb. [No. 4063].

2 ♂, 2 ♀. Hat Sanuk, S. W. Siam, 12-18 March 1919 Nos. [5244, 5301, 5321. 5380].

Iris dark; maxilla horny, mandible pinkish white; feet fleshy".

Total length ♂, 171, 165, 172, 169, 170; ♀, 160, 169; wing ♂, 78, 81, 76, 83, 80; ♀, 76, 81; tail ♂, 74, 75, 75, 74, 73; ♀, 69, 72; tarsus ♂, 22, 21, 21, 22, 22.5; ♀, 23, 22; bill from gape ♂, 19, 17, 17, 18, 18; ♀, 19, 19 mm.

535. Anthus richardi richardi Vieill.

Anthus richardi, Vieillot, Nouv. Dict. d'Hist. Nat. xxvi, 1818, p. 491 (France).

Corydalla richardi, A., p. 365 (Tavoy to Bankasoon); C. i, p. 166 (Tenasserim).

Anthus richardi richardi, K., p. 220 (Tachin and Koh Lak).

♂, 2 ♀. Koh Lak, S. W. Siam, 4-9 April 1919 [Nos. 5045, 5062, 5195].

"Iris dark; maxilla horny, mandible fleshy; feet brownish fleshy".

Total length ♂, 198; ♀, 185, 191; wing ♂, 94; ♀, 88, 89; tail ♂, 78; ♀, 74, 80; tarsus ♂, 32.5; ♀, 32, 28; hind claw ♂, 19.5; ♀, 18, 19; bill from gape ♂, 20; ♀, 19.5, 19.5 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Williamson obtained a specimen at Naihut, Langsuan, Peninsular Siam on 29 October 1921: this is the most southerly occurrence on record in the Peninsula.

In view of Meinertzhagen's remarks on the forms of *Anthus richardi* (Ibis, 1921, pp. 651-655) we are a little doubtful about the determination of the large birds of Siam that we have seen. His measurements for the three forms that occur in Eastern Asia are:—

	wing.	culmen.	hind-toe.
<i>A. r. richardi</i> (35 ex.) ...	90-100	15.5-18	16-22 mm.
<i>A. r. striolatus</i> (13 ex.) ...	87-99	16-17.5	10.5-15.5 mm.
<i>A. r. sinensis</i> (12 ex.) ...	85-91	17-18	15-19 mm.
Siamese birds measure ...	85-94	17.5-19.5*	16-19 mm.

The long hind-claw excludes reference to *striolatus*, whereas the wing seems too short for *richardi*. They may possibly be *sinensis* which, according to La Touche, leaves Yunnan for the South in October and returns in April. It has been obtained in Hainan and the Philippines in winter.

Anthus richardi striolatus Blyth.

Anthus striolatus, Blyth, Journ. Asiat. Soc. Bengal, xvi, 1847, p. 435 (Darjiling).

Corydalla striolata, A., p. 366 (Mergui; Bankasoon); C. i, p. 167 (S. Tenasserim).

If the above references of three birds from South Tenasserim to *striolatus* are correct, the form should occur in S. W. Siam: Gyldenstolpe records it from N. Siam.

536. *Anthus richardi malayensis* Eyton.

Anthus malayensis, Eyton, P. Z. S. 1839, p. 104 (Malacca); F., p. 74 (Trang); H., p. 151 (Koh Samui and Pennan).

Corydalla malayensis, A., p. 366 (Banksoon); B., p. 9 (Junk Seylon).

Anthus richardi malayensis, I., p. 32 (Koh Lak); K., p. 220 (Koh Lak); L., p. 118 (Ghirbi and Pulo Panjang).

Corydalla rufula, A., p. 366 (Tavoy to Malewoon); C. i, p. 168 (Tenasserim).

Anthus rufulus (form *malayensis*), D., p. 66 (Patani); E., p. 71 (Patani); Williamson, Journ. N. H. Soc. Siam, ii, 1917, p. 204 (Bangkok).

Anthus richardi rufulus, M., p. 412 (Bangkok).

*Tip to frontal bone.

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♂. Kandhuli, Chaiya, P. Siam, 21 Sept. 1919.

♂, ♀. Namchut, P. Siam, 26 Feb. 1919 [Nos. 4248, 4263].

2 ♀. Tapli, Pakchan, P. Siam, 9 March 1919 [Nos. 4523-4].

♀. Koh Lak, S. W. Siam, 1 April 1919 [No. 4896].

"Iris dark; maxilla brown, mandible yellow fleshy with brown tip; feet fleshy."

Total length ♂, —, 160; ♀, 158, —, 162, 166; wing ♂, 84.82; ♀, 78, 83, 77, 77; tail ♂, 66, 67; ♀, 63, 68, 68, 62; tarsus ♂, 27, 27.5; ♀, 26, 27, 27, 26; bill from gape ♂, 20, 18; ♀, 20, 19, 19.5, 18 mm.

Hume and Davison recorded both *rufulus* and *malayensis* from South Tenasserim; but it is unlikely, of course, that both occur there. Certainly birds collected in the Malay Peninsula vary considerably in colour.

537. *Anthus trivialis hodgsoni* Richmond.

Anthus hodgsoni, Richmond, in Blackwelder, Carnegie Inst. Washington, No. 54, 1907, p. 493 (nom. nov.).

Anthus maculatus, Jerdon (nec Vieillot), Birds of India, iii, 1864, p. 873 (India); F., p. 74 (Trang); G., p. 149 (Ratburi or Petchaburi).

Pipastes maculatus, A., pp. 375, 517 (Tavoy, Pabyin); C. i, p. 171 (Tenasserim).

Not common in the Peninsula: Mr. Williamson has four examples from Nong Kae, S. W. Siam (Dec. and Jan.). Kedah Peak is the most southerly place at which we have met with it.

538. *Anthus cervinus* (Pall.).

Motacilla cervina, Pallas, Zoogr. Ross-Asiat. i, 1827, p. 511 (Siberia).

Anthus cervinus, A., p. 367 (Tavoy to Pakchan); C. i, p. 169 (Tenasserim); K., p. 220 (Koh Lak); Williamson, Journ. N. H. Soc. Siam, ii, 1917 p. 205 (Bangkok).

♂. Tapli, Pakchan, P. Siam, 3 March 1919 [No. 4397].

"Iris dark; bill black, base yellow; feet reddish brown".

Total length 158; wing 86; tail 63; tarsus 23.5; bill from gape 18 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

ALAUDIDAE.

LARKS.

- | | | | |
|---|--|---------------------------------------|---|
| 1 | { First primary much shorter than the wing-coverts | <i>Alauda arvensis herberti</i> | |
| | { First primary much longer than the wing-coverts | .. .. . | 2 |
| | { Inner web of outer tail-feather largely white | | |
| | or buffy, upper side blackish | <i>Mirafra cantillans williamsoni</i> | |
| 2 | { Inner web of outer tail-feather dark brown, | | |
| | upper side brownish | <i>M. assamica marionae</i> | |

539. *Mirafra assamica marionae* Baker.

Mirafra assamica marionae, Baker, Bull. Brit. Orn. Club, xxxvi, 1915, p. 34 (Ayuthia); I., p. 30 (Koh Lak).

2, ♂, 5 ♀. Koh Lak, S. W. Siam, 4-10 April 1919 [Nos. 5046-7, 5076-7, 5088, 5096, 5232].

"Iris brown; maxilla dark horn, mandible pinkish white; feet yellowish flesh."

Total length ♂, 135, 145; ♀, 133, 133, 133, 137, 145; wing ♂, 77, 79; ♀, 75, 73, 77, 76, 75; tail ♂, 48, 50; ♀, 43, 43, 42, 44, 43; tarsus ♂, 27.5, 27; ♀, 26.5, 25, 25, 27; bill from gape ♂, 16, 16; ♀, 16, 16, 15.5, 16, 17 mm.

Mirafra cantillans williamsoni Baker.

Mirafra cantillans williamsoni, Baker, Bull. Brit. Orn. Club, xxxvi, 1915, p. 9 (Bangkok); M., p. 413 (Bangkok).

Alauda arvensis herberti Hartert.

Alauda arvensis herberti, Hartert, Bull. Brit. Orn. Club, xliii, 1923, p. 149 (Bangkok).

Alauda gulgula sala, K., p. 220 (Koh Lak); M., p. 414 (Bangkok); Williamson, Journ. N. H. Soc. Siam, ii, 1916, p. 60 (Bangkok).

These larks will probably be found on suitable ground in S. W. Siam.

A. Hume & Davison, Stray Feathers, vi, 1878.
 B. Müller, Die Ornis der Insel Salanga, 1882.
 C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
 D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1950.
 F. Robinson and Kloss, Ibis, 1910-11.
 G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
 H. Robinson, Journ. F. M. S. Museums, v, 1915.

NECTARINIIDAE.

SUNBIRDS AND SPIDER-HUNTERS.

1	{ Bill slender; sexes different, plumage of males in	2
	{ part metallic; size generally smaller (Sunbirds)	..	..	..
	{ Bill stout, sexes alike, plumage not metallic;	..	..	..
	{ size generally larger (Spider-hunters)	..	..	..
					14

SUNBIRDS: MALES.

2	{ Lower mandible distinctly curved downwards,	..	..	..	3
	{ bill slenderer	..	..	..
	Lower mandible straight or nearly so, bill stouter	..	..	..	11
3	{ Throat and breast scarlet	..	..	..	4
	{ Throat and breast not scarlet	..	..	..
4	{ Forehead and tail scarlet	..	..	..	5
	{ Forehead and tail not scarlet	..	..	..
5	{ Forehead dark metallic violet	..	..	..	7
	{ Forehead dark metallic green	..	..	..
6	{ Abdomen yellow	..	..	..	8
	{ Abdomen not yellow	..	..	..
7	{ Crown and nape metallic	..	..	..	9
	{ Crown and nape not metallic	..	..	..
8	{ Crown bright metallic green, mantle dull black	..	..	..	10
	{ Crown dark metallic blue or purplish, mantle not black	..	..	..
9	{ Breast crimson, no yellow lateral tufts	..	..	..	12
	{ Breast purple, yellow lateral tufts present	..	..	..
10	{ Mantle and abdomen purplish blue	..	..	..	13
	{ Mantle crimson, abdomen yellowish grey	..	..	..
11	{ Underparts striped, a metallic nuchal collar	..	..	..	12
	{ Underparts not striped, no collar	..	..	..
12	{ Crown and mantle not metallic, only forehead	..	..	..	13
	{ metallic	..	..	..
13	{ Crown, mantle and forehead metallic	..	..	..	14
	{ Cheeks olive, breast bright yellow	..	..	..
14	{ Cheeks bright rusty, breast greenish yellow	..	..	..	15
	{ Cheeks bright rusty, breast greenish yellow	..	..	..

SUNBIRDS: FEMALES.

2	{ Lower mandible distinctly curved downwards,	..	..	..	3
	{ bill slenderer	..	..	..
	Lower mandible straight or nearly so, bill stouter	..	..	..	10
3	{ A yellow rump band	..	..	..	4
	{ No yellow on rump	..	..	..
4	{ Tail and wings washed with red	..	..	..	5
	{ No red on tail or wings	..	..	..
5	{ Underside green, sometimes a yellow tinge	..	..	..	6
	{ Underside yellow, no green tinge	..	..	..

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
 J. Robinson, Journ. F. M. S. Mus. vii, 1917.
 K. Kloss, Ibis, 1918.
 L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

- M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
 (first and second parts).
 M. 1. Baker, op. cit., iv, 1920 (third part).
 M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

6	{ Tail much graduated, foreneck greyish .. .. .	..	..	<i>Ae. nipalensis australis</i>	
	{ Tail little graduated, foreneck greenish .. .. .	..	..	<i>Ae. siparaja</i> subsp.	
7	{ Throat pale grey .. .. .	..	..	<i>Chalcostetha chalcostetha</i>	
	{ Throat not grey .. .. .	..	..	..	8
	{ Paler yellow below, wing less than 2 inches			<i>Leptocoma b. brasiliiana</i>	
8	{ Deeper yellow below, wing nearly always 2				
	{ inches or more .. .. .	..	..	..	9
	{ Lateral tail-feathers more broadly tipped				
	{ with white .. .. .	..	..	<i>L. jugularis flammixillaris</i>	
9	{ Lateral tail-feathers less broadly tipped			<i>L. asiatica intermedia</i>	
	{ with white .. .. .	..	..	..
10	{ Under-parts striped, no metallic nuchal collar			<i>Anthreptes m. macularia</i>	
	{ Under-parts not striped, forehead not metallic	..	..	..	11
11	{ Under-parts grey and greenish .. .. .	..	..	<i>A. simplex frontalis</i>	
	{ Under-parts yellow .. .. .	..	..	<i>A. m. malaccensis</i>	
				<i>A. rhodolaema</i>	

SPIDER-HUNTERS: MALES AND FEMALES:

14	{ Culmen ridged between the nostrils .. .. .	..	..	..	15
	{ Culmen rounded between the nostrils .. .. .	..	..	..	18
15	{ Upper-parts boldly streaked .. .. .	..	..	<i>Arachnothera magna aurata</i>	
	{ Upper-parts plain .. .. .	..	..	..	16
16	{ Foreneck and breast not streaked .. .. .	..	..	<i>A. d. longirostra</i>	
	{ Foreneck and breast faintly streaked .. .. .	..	..	..	17
17	{ With bright yellow cheek tufts .. .. .	..	..	<i>A. chrysogenys</i>	
	{ No yellow cheek tufts .. .. .	..	..	<i>A. affinis modesta</i>	
18	{ Foreneck and breast faintly streaked .. .. .	..	..	<i>A. robusta</i>	
	{ Foreneck and breast plain .. .. .	..	..	..	19
19	{ A yellow ring round the eye .. .. .	..	..	<i>A. flavigastra</i>	
	{ No ring round the eye .. .. .	..	..	<i>A. crassirostris</i>	

[Several sunbirds inhabiting the coast line and small islands are much affected by, apparently, the damp salt air and increased sunlight: such are the forms of *Leptocoma brasiliiana* (♀), *L. asiatica* (♀) and *L. jugularis*. They bleach to a kind of hair-brown above and lose most of the yellow of the underparts. It is practically impossible to include birds in this condition in a simple key].

540. *Aethopyga mystacalis temmincki* (Mull.).

Nectarinia temmincki, S. Müller, Verh. Nat. Ges. Ned. Ind. Land-en Volkenk., 1843, p. 173 note (Sumatra).

Aethopyga temmincki, Richmond, Proc. U. S. Nat. Mus. xxii, 1900, p. 319 (Trang); F., p. 75 (Trang).

A Malaysian hill and mountain species, not known north of Trang.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornithologie der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

***Aethopyga siparaja siparaja* (Raff.).**

Certhia siparaja, Raffles, Trans. Linn. Soc. xiii, 1821, p. 299 (Sumatra).

Aethopyga siparaja, F., p. 74 (partim : Trang).

Aethopyga siparaja cara, J., p. 190 (Langkawi).

This subspecies may occur in Patani, but the most northerly examples we possess, belonging undoubtedly to it, come from Penang; birds from Perlis and Langkawi show indications of transition to *A. e. cara*.

541. *Aethopyga siparaja cara* Hume.

Aethopyga cara, Hume, Stray Feathers, ii, 1875, p. 473, note (south of Moulmein, Tenasserim); A., p. 179 (Tavoy to Tenasserim town); B., p. 22 (Junk Seylon); C. i, p. 340 (S. to Tenasserim town); G., p. 149 (Ratburi or Petchaburi); H., p. 151 (Koh Samui); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1889, p. 434 (Malewoon).

Aethopyga siparaja, F., p. 74 (Trang).

Aethopyga siparaja cara, J., p. 190 (Terutau), L., p. 118 (Junk Seylon).

Aethopyga seheriae cara, M., p. 414 (Patiyu).

♂. Pulo Mohea (S. Island), P. Siam, 2 Feb. 1919 [No. 3919].

♀. Koh Pipidon, Ghirbi Bay, P. Siam, 5 Feb. [No. 3939].

2 ♂. Koh Rah, P. Siam, 16-17 Feb. 1919 [Nos. 4040, 4076].

♀. Koh Yam Yai, P. Siam, 18 Feb. 1919 [No. 4119].

♂ imm. Tapli, P. Siam, 6 March 1919 [No. 4451].

5 ♂, ♀. Tasan, Chumporn, P. Siam, 14-23 March 1919 [Nos. 4589, 4610-11, 4695, 4811].

"Male, iris dark; bill black, lower mandible brownish; feet brownish black; female, iris dark hazel; bill blackish above, brown beneath; feet dark brown"

Total length ♂, 115, 122, 113, 115, 118, 121, 107; ♀, 104, 103, 103; wing ♂, 55, 55, 56, 55, 53, 56, 52; ♀, 48, 49, 48; tail ♂, 52, 50, 48, 48, 49, 50, 40 (imp.); ♀, 41, 40, 34; tarsus ♂, 16.5, 15, 14, 15, 14, 15, 15; ♀, 14, 13.5, 13; bill from gape ♂, 22, 19, 18, 18, —, 18, 18; ♀, 17, 17, 16 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

This series is all fairly typical *A. s. cara*; in Trang both typical *A. s. cara* and birds intermediate between it and *A. s. siparaja* occur: specimens from Terutau Island and the Butang group, as well as from the adjacent mainland of Perlis, are intermediate. In Penang the birds are true *A. s. siparaja*, while on the east coast those from the islands in the Bandon bight are *A. s. cara*.

The specimen from Pulo Mohea, though having the metallic area extending over the crown, is there distinctly bluish rather than greenish and is therefore intermediate between *siparaja* and *cara*.

All specimens examined from Trang, Terutau and Butang Islands and Koh Samui, when not typical *A. s. cara*, are much nearer to it than to the scuthern race.

542. *Aethopyga saturata anomala* Richm.

Aethopyga anomala, Richmond Proc., U. S. Nat. Mus. xxii, 1900, p. 318 (Khao Song, Trang); F., p. 75 (Trang).

Aethopyga saturata, Baker, Journ. Bombay Nat. Hist. Soc. xxviii, 1921, p. 87 (footnote).

This race is only known from the typical series of fifteen specimens, obtained on the mountains of Trang by Dr. W. L. Abbott. We possess by exchange a pair of paratypes from Khao Num Phi, 3,000 ft., which indicate that the form differs from *Aethopyga s. saturata* by the absence of the yellow rump-band and by smaller size: from *A. saturata wrayi*, of the mountains of Perak, Selangor and Pahang,* also by the absence of the rump-band, by the darker red of the mantle which spreads less extensively to the sides of the breast, and by the less bright broken greenish yellow breast-band which, in the large majority of specimens of *A. s. wrayi*, is also flecked with red.

The yellowish green of the breast, sometimes almost forming a band, separates both peninsular forms from the typical race which is blackish on breast and upper abdomen.

The female examined is duller, more greyish green than that sex of *A. s. wrayi*.

* P. Z. S. 1887, p. 440, pl. xxxviii, fig. 2.

A. Hume & Davison, Stray Feathers, vi, 1878.	E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
B. Müller, Die Ornith. der Insel Salanga, 1882.	F. Robinson and Kloss, Ibis, 1910-11.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.	G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
D. Bonhote, P. Z. S. 1901, Vol. i.	H. Robinson, Journ. F. M. S. Museums, v, 1915.

543. *Aethopyga nipalensis australis* Rob. & Kloss.

Aethopyga nipalensis australis, Robinson & Kloss, Bull. Brit. Orn. Club. xlv, 1923, p. 14 (Khao Luang, Nakon Sritamarat).

Aethopyga sanguinipectus, H., p. 109 (Khao Nong, 3,500 ft., - Bandon).

This sunbird is only known from the above mountains and differs from the typical form in smaller size and much smaller yellow rump-band in the male.

The locality is a considerable extension of range for the species which hitherto has not been obtained from any locality south of Muleyit mountain. Mr. W. J. F. Williamson has specimens from North Siam which have not yet been critically examined and another race, *Ae. n. victoriarum* Rippon, inhabits the Chin Hills, (Bull. Brit. Orn. Club. xiv, 1904, p. 83).

544. *Chalcostetha calcostetha* (Jard.).

Nectarinia calcostetha, Jardine, Naturalist's Library, Ornith, xiii, *Nectariniidae*, 1843, p. 263 (Java, Jardine, *op. cit.*, p. 274, under *N. insignis*).

Chalcostetha insignis, A., p. 183 (Mergui and Malewoun).

Chalcostetha pectoralis, B., p. 22 (Junk Seylon); C. i, p. 317 (S. Tenasserim).

Chalcostetha calcostetha, J., p. 191 (Terutau).

Generally common wherever it occurs, but apparently very local.

[If the types of the three genera *Leptocoma*, *Cyrtostomus* and *Arachnechthra*, proposed for Asiatic birds by Cabanis, are not regarded as generically different, and yet are not considered to belong to *Cinnyris* (type *splendidus*, of West Africa), the generic name *Leptocoma* (type *brasiliensis*) which has page priority, must be used].

545. *Leptocoma brasiliensis brasiliensis* (Gm.).

Certhia brasiliensis, Gm., Syst. Nat. i, 1788, p. 474 (Java).

Nectarinia hasselti, Temm, Pl. Col. 1825, Pl. 376, fig. 3 (Java).

Nectarinia phayrei, Blyth, Journ. Asiat. Soc. Bengal, xii, 1843, p. 1008 (Arracan).

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919, (first and second parts).

M. 1. Baker, *op. cit.*, iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Leptocoma braziliana, A., p. 184 (Tavoy to Malewoon); J., p. 190 (Langkawi).

Leptocoma hasselti, B., p. 24 (Junk Seylon); F., p. 77 (Terutau, Trang); H. p. 152 (Koh Pennan).

Cinnyris hasselti, C. i, p. 319 (Tenasserim).

Nectarophila hasselti, Salvad., Ann. Mus. Civ. Gen. (2) vii, 1899, p. 435 (Malewoon).

Cinnyris brasiliana, Oberh., Smith. Misc. Coll. 60, No. 7, 1912, p. 18, note (type locality: Java).

♂. Tung Pran, Takuatung, P. Siam, 13 Feb. 1919 [No. 3964].

♂, ♀. Koh Rah, P. Siam, 15-17 Feb. 1919 [Nos. 4039, 4077].

♂. Koh Pra Tung, P. Siam, 18 Feb. 1919 [No. 4107].

3 ♂, 2 ♀. Mamoh, P. Siam, 26 Feb. 1919 [Nos. 4270-4].

2 ♂. Tapli, P. Siam, 7-8 March 1919 [Nos. 4452, 4511].

Male. "Iris, bill and feet dark." Female. "Iris dark, upper mandible black, lower brownish, feet black or brownish."

Total length ♂, 98, 102, 102, 101, 106, 97, 100, 100; ♀, 96, 94, 96; wing ♂, 47, 51, 48, 47, 51, 47, 49, 48; ♀, 47, 46, 46; tail ♂, 34, 30, 34, 34, 34, 32, 34, 30; ♀, 35, 33, 29; tarsus ♂, 12.5, 12.5, 13, 15, 14, 13, 13.5, 13; ♀, 14, 13, 13; bill from gape ♂, 16, 14, 16, 16, 16, 17, 16, 16; ♀, 19, 16, 16 mm.

We can detect no differences between northern and southern birds. The species is commoner in the north of the Peninsula, especially near the sea and on islands, than it appears to be in the south, where suitable localities are not so numerous.

546. *Leptocoma asiatica intermedia* (Hume).

Arachnechthra intermedia, Hume, Ibis, 1870, p. 436 (Thayetinyo).

Arachnechthra asiatica, I, p. 33 (Koh Lak).

18 ♂, 4 ♂ imm., 15 ♀. Koh Lak, S. W. Siam, 1-9 April 1919 [Nos. 4783-7, 4881-6, 4927, 4955-7, 4961-2, 4971, 4981-6, 5049, 5052, 5068, 5071, 5101, 5112-3, 5157-8, 5166-7, 5192-3].

"Iris dark; bill and feet black (males): bill black, yellowish at base, feet greenish black (females).

Total length ♂, 108, 108, 105, 112, 110, 113, 118, 115, 112, 112, 113, 112, 112, 108, 112, 112, 108, 112; ♀, 96, 113, 109, 108, 105, 103, 105, 104, 108, 102, 108, 106, 107, 107, 107; wing ♂, 55,

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

53, 55, 53, 53, 57; 56, 56, 53, 55, 55, 54, 54, 53, 55, 55, 54, 54;
 ♀, 52, 53, 53, 53, 52, 51, 52, 50, 52, 52, 52, 51, 54, 51, 52; tail ♂,
 38, 38, 36, 37, 37, 40, 39, 39, 38, 38, 38, 37, 38, 34, 38, 38, 37, 38;
 ♀, 29, 35, 33, 32, 35, 34, 33, 33, 36, 30, 35, 32, 34, 32, 35; tarsus
 ♂, 14.5, 13.5, 13, 13.5, 14.5, 13.5, 14, 15, 14.5, 14, 15, 14, 15, 14, 15;
 15, 14.5, 14.5; ♀, 14, 15, 14.5, 14, 14, 15, 14.5, 14, 14.5, 14, 15,
 14, 14, 14, 15; bill from gape ♂, 18, 18, 18, 18, 18, 19, 18, 18, 20,
 19, 18, 18.5, 17.5, 17.5, 18.5, 19, 18, 19; ♀, 16, 19, 18, 19, 17, 18.5,
 18, 18, 18.5, 17, 18, 18, 18.5, 18, 18 mm.

Four examples, sexed as males, do not differ from females.

Exceedingly common at Koh Lak, the Purple Sunbird has not been met with further south in the Peninsula.

547. *Leptocoma jugularis flammaxillaris* (Blyth).

Nectarinia jugularis (nec Vieill.) Blyth, Journ. Asiat. Soc. Bengal xii, 1843, p. 979 (Tenasserim): descr.

Nectarinia flammaxillaris, Blyth, op. cit. xiv, 1845, p. 557: nom.

Arachnechthra flammaxillaris, A., pp. 192, 507 (Tavoy to Maleewoon); Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 856 (S. Tenasserim).

Cyrtostomus flammaxillaris, B., p. 25 (Junk Seylon); F., p. 77 (Trang and Langkawi); H., p. 152 (Koh Samui and Koh Penan); I., p. 33 (Koh Lak); J., p. 190 (Trang; Terutau; Langkawi and Butang Islands); K., p. 216 (Tachin); L., p. 118 (Ghirbi; Pulo Panjang; Junk Seylon); Salvad, Ann. Mus. Civ. Gen. (2) vii, 1889, p. 435 (Maleewoon).

Cinnyris pectoralis, C. i, p. 320 (Tenasserim).

Cyrtostomus pectoralis, F., p. 77 (Trang).

Arachnechthra flammaxillaris flammaxillaris, M., p. 414 (Bangkok and Tung Song).

♂. Pulo Mohea, N. Island, P. Siam, 2 Feb. 1919 [No. 3918].

2 ♂ ad., ♂ imm., ♀. Tung Pran, Takuatung, P. Siam, 13-14 Feb. 1919 [Nos. 3965, 3980, 3982, 4012].

2 ♂ ad., ♂ imm. Koh Rah, Takuapa Inlet, P. Siam, 16-17 Feb. 1919 [Nos. 4064, 4068, 4078].

♂ ad. Koh Pra Tung, P. Siam, 18 Feb. 1919 [No. 4100].

♂, ♀ ad. Victoria Pt., S. Tenasserim, 24 Feb. 1919 [Nos. 4190-1].

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

♂ ad., ♂ imm. Nam Chuk, Pakchan Estuary, P. Siam, 24-25 Feb. 1919 [Nos. 4194, 4238].

2 ♂ ad., ♀. Mamoh, Pakchan Estuary, P. Siam, 26-28 Feb. 1919 [Nos. 4268, 4287, 4311].

7 ♂ ad., ♂ imm., 2 ♀. Koh Lak, Ratburi, P. Siam, 3-9 April 1919 [Nos. 4987, 5048, 5091-3, 5114-5, 5168-9, 5218].

"Iris dark; bill black; feet black or greenish black; young birds with the gape orange."

Total length ♂, 110, 113, 115, 115, 115, 113, 115, 115, 110, 112, 113, 112, 112, 112, 109, 112, 113; ♀, 103, 103, 110, 112, 103; wing ♂, 52, 52, 51, 52, 54, 53, 52, 51, 51, 51, 52, 49, 51, 52, 48, 52, 51; ♀, 51, 50, 51, 47, 47; tail ♂, 47, 41, 41, 43, 42, 40, 40, 43, 42, 38, 40, 37, 40, 38, 35, 38, 40; ♀, 38, 35, 36, 34, 30; tarsus ♂, 15, 13, 14, 13.5, 15, 13, 13.5, 15, 13, 14, 13.5, 14, 14, 13, 14.5, 13, 14; ♀, 13.5, 12, 14.5, 13.5, 12; bill from gape ♂, 18, 18, 18, 18, 19, 20, 18.5, 18, 18, 19, 17, 17.5, 17.5, 18, 17.5, 16.5, 18; ♀, 20, 18, 18, 17, 17.5 mm.

The above are measurements of adults only.

The species is common over the whole of P. Siam especially on the coasts and islands, extending southwards as far as Penang. Further down the Straits it is replaced by *C. j. ornata* (Less.) [*pectoralis* auct.], which is distinguished by being much brighter yellow beneath, by having in males, the forehead metallic violet, and by the absence of the maroon band separating the metallic colour of the breast from the yellow of the belly.

In our large series, however, a bird from Chong, Trang, has the forehead broadly metallic, while another from Krongmon has a few metallic frontal feathers, as has a bird from Terutau, the specimen from Pulo Mohea listed above, and one from Koh Lak [No. 5091]. In other respects, however, these birds are typical *flammaxillaris*, with the belly pale yellow and the maroon pectoral band well developed.

A. Hume & Davison, *Stray Feathers*, vi, 1878.
B. Müller, *Die Ornithologie der Insel Salanga*, 1882.
C. Oates, *Birds Brit. Burmah*, Vols. i & ii, 1883.
D. Bonhote, *P. Z. S.* 1901, Vol. i.

E. O. Grant, *Fasciculi Malayenses*, iii (Birds), 1950.
F. Robinson and Kloss, *Ibis*, 1910-11.
G. Gairdner, *Journ. N. H. Soc. Siam*, i, 1915.
H. Robinson, *Journ. F. M. S. Museums*, v, 1915.

On the other hand a bird from Tanjong Karang, coast of Selangor, otherwise typical *C. j. ornata*, has the pectoral maroon band quite as strongly developed as in true *C. j. flammaxillaris*. The intermediate specimens are intermediate in locality between the two forms, and it is evident that both must be regarded as related sub-specifically.

548. *Anthreptes macularia macularia* Blyth.

Anthreptes macularia, Blyth, Journ. Asiat Soc. Bengal. xi, 1842, p. 107 (Settlement of Malacca).

Anthreptes nuchalis, Blyth, op. cit. xii, 1843, p. 980 (Singapore).

Anthreptes hypogrammica, A., p. 178 (Bankasoon, Malewoon); C. i, p. 323 (Mergui southwards).

Anthothreptes hypogrammica, E., p. 73 (Patani); F., p. 76 (Trang); H., p. 110 (Bandon); L., p. 118 (Junk Seylon).

♂ imm. Victoria Point, S. Tenasserim, 24 Feb. 1919 [No. 4178].

♂ ad., ♂ imm., ♀. Tapli, Pakchan Estuary, P. Siam, 6-8 March 1919 [Nos. 4450, 4491, 4497].

♂ ad., ♂ imm., ♀. Tasan, Chumporn, P. Siam, 13-29 March 1919 [Nos. 4554, 4738, 4903].

Male. "Iris reddish brown, bill black, feet oily yellowish green". Female. "Iris chocolate, upper mandible black, lower yellowish at base, feet oil green."

Total length ♂, 142, 130, 132, 138; ♀, 146, 138; wing ♂, 67, 67, 64, 65; ♀, 63, 58; tail ♂, 53, 56, 50, 54; ♀, 57, 50; tarsus ♂, 16.5, 16, 17, 18; ♀, 17, 16.5; bill from gape ♂, 23, 23, 24, 22; ♀, 22, 22 mm.

An investigation of the synonymy of the species reveals the inconvenient fact that the proper name of this bird is not *hypogrammica* Muller, but *Anthreptes macularia*, Blyth, loc. cit. supra. This name has hitherto been treated as a *nomen nudum* but is not strictly so according to current usage: the reference reads "*Anthreptes macularia* Nobis: a species allied in plumage to the *Arachnotherae*," which is as adequate as many generally accepted descriptions.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1923.

549. *Anthreptes simplex frontalis* (Blyth).

Nectarinia frontalis, Blyth, Journ. Asiat. Soc. Bengal. xiv, 1845, p. 558 (Singapore).

Anthreptes xanthochloru, Hume, Stray Feathers, iii, 1875, p. 319 (Pabyin, near Mergui).

Anthreptes simplex, A., p. 188 (Pabyin to Malewoon); C. i, p. 324 (S. Tenasserim).

Anthothreptes simplex, F., p. 75 (Trang); Rob. & Kloss, Journ. F. M. S. Mus. viii, Pt. 2, 1918, p. 243; Hopwood, Journ. Bombay Nat. Hist. Soc. xxvi, 1919, p. 857 (S. Tenasserim).

♂. Tung Pran, Takuatung P. Siam, 14 Feb. 1919 [No. 3995].

♂. Tasan, Chumporn, P. Siam, 20 March 1919 [No. 4714].

"Iris red or reddish; bill black or greenish black; feet oil or olive green."

Total length ♂, 118; ♀, 121; wing ♂, 56; ♀, 57; tail ♂, 47; ♀, 49; tarsus ♂, 18; ♀, 14; bill from gape ♂, 16; ♀, 16 mm.

These are rather small birds.

Comparison of the above Siamese specimens and a male from Trang, with fourteen others from various parts of the Malay Peninsula southwards to Bukit Lantai in Negri Sembilan, reveals no differences. *Anthreptes xanthochloru* Hume is, therefore, synonymous with *N. frontalis* Blyth. The Malay Peninsula birds, however, differ from Sumatran specimens (12 examined), and from the figure of the type from Gunong Singgalang, Padang, in having the under surface paler and strongly washed with yellowish green, less clear grey than in the Sumatran bird.

Blyth's name will therefore have to stand for the continental birds and for those of Borneo which are similar (15 specimens examined). Males of this species are larger than females; the wing of the former often reaches 65 mm., that of the latter rarely exceeds 60 mm.

550. *Anthreptes malaccensis malaccensis* (Scop.).

Certhia malaccensis, Scopoli, Del. Flor. et Faun. Insubr., 1786, p. 91 (Malacca).

Certhia lepida, Latham, Ind. Orn. i, 1790, p. 298 (India).

Anthreptes malaccensis, A., p. 186 (Shymotee to Sadyin); C. i, p. 324 (Tenasserim); I., p. 34 (Hue Sai, near Koh Lak).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Borneo, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Anthothreptes malaccensis; B., p. 23 (Junk-Seylon); D., p. 65 (Patani); E., p. 73 (Patani); F., p. 76 (Langkawi); H., p. 152 (Koh Samui and Koh Pennan); J., p. 191 (Terutau and Telibon Is.); L., p. 119 (Pulo Panjang); M., p. 414 (Bangkok and Meklong); Salvad., Ann and Mus. Civ. Gen. (2) vii, 1889, p. 435 (Malewoon).

♂ imm. Koh Pipidon, P. Siam, 4 Feb. 1919 [No. 3933].

2 ♂ ad., 2 ♀. Tung Pran, Takuatung, P. Siam, 12-13 Feb. 1919 [Nos. 3961, 3963, 3966, 3973].

3 ♂ ad., ♂ imm. Koh Pra Tung, Takuapa Inlet, P. Siam, 17-18 Feb. 1919 [Nos. 4087, 4096-8].

♂ ad. Victoria Point, S. Tenasserim, 24 Feb. 1919 [No. 4188].

Adults "Iris chocolate or reddish brown; bill black, feet sage green; soles yellow".

Total length ♂, 139, 138, 132, 130, 132, 137; ♀, 128, 53, 53; ♀, 48, 48; tarsus ♂, 18, 16, 17, 16, 17, 17; ♀, 15.5, 17; bill from gape ♂, 20, 20, 20, 19, 21, 22; ♀, 29, 29 mm.

We did not meet with this species north of Victoria Point, but have no doubt that it occurs throughout the Peninsula north to Bangkok wherever there are suitable localities (i. e., coconut palm groves). Count Gyldenstolpe records it from "hill forests" on the Siam-Tenasserim boundary, near Hue Sai, but as he did not apparently secure specimens the record is open to doubt. Possibly the species was *A. rhodolaema* (L., p. 34).

Variation in this Sunbird is generally shown in the female: the present examples, and others from Peninsular Siam, are duller and greyer than topotypical birds from Selangor and Johore, but we do not care at present to recognise a northern form.

551. *Anthreptes rhodolaema* Shelley.

Anthreptes rhodolaema, Shelley, Monogr. Nectariniidae, 1878, p. 313, pl. 101, fig. 1 (Malacca).

Anthothreptes rhodolaema, F., p. 76 (Trang); Salvad., Ann. & Mus. Civ. Gen. (2) vii, 1889, p. 435 (Malewoon).

We have only once come across this species in any abundance and this was at Chong, in the interior of the state of Trang; we

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.

(first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

have it from Penang, from Trong on the coast of Perak, and Temengoh in the north of that State.

It is quite a different bird from *A. malaccensis*, from which it can at once be distinguished by its darker olive green belly in both sexes and by the maroon red ear-coverts and wing-coverts of the male. There is no difference in size.

552. *Arachnothera robusta* Müll. & Schleg.

Arachnothera robusta, Müller & Schlegel, Verh. Nat. Ges. Ned. Ind., Land-en Volkenk, 1843, p. 68, pl. 2, fig. 1 (W. Sumatra); F., p. 78 (Trang).

4 ♂. Chong, Trang, P. Siam, 4-17 Dec. 1911.

This spider-hunter was quite common at Chong, but has not been observed elsewhere in Siam, these birds being the most northerly on record.

All are fully adult, the orange pectoral tufts strongly developed, and measure wing 84-90, bill 52-54 mm., against wing 88-93, bill 57-60.5 mm. in three similarly adult males from Selangor and Western Pahang. These latter dimensions are larger than recorded for Sumatran or Bornean birds, but we can detect no differences in colour and consider that it is intrinsically improbable that the Sumatran, Bornean and northern Malayan birds are identical, while the southern Malayan ones differ.

The Javan bird, *Arachnothera robusta armata* Müll. & Schleg. (= *Arachnothera uropygialis*, G. R. Gr.) is very markedly smaller and greyer on the throat (*vide* Hartert, Nov. Zool. viii, 1901, p. 52). We still doubt if this bird is really found in Sumatra; but if so it will have to stand as a distinct species.

553. *Arachnothera longirostra* (Lath.).

Certhia longirostra, Latham, Ind. Ornith. i, 1790, p. 299 (Sylhet).

Arachnothera pusilla, Blyth, Cat. Birds. Mus. Asiat. Soc. Bengal, 1849, p. 328 (Arracan).

Arachnothera longirostra, A., pp. 174, 507 (Tavoy to Bankasoon); B., p. 25 (Junk Seylon); C. i, p. 330 (Tenasserim); E., p. 72 (Patani); F., p. 77 (Trang); H., p. 109 (Bandon); L., p. 119 (Ghirbi).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornis der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Arachnothera longirostris longirostris, M., p. 414 (Tung Song and Patiyu).

♂. Tapli, Pakchan Estuary, P. Siam [No. 4517].

2 ♂, ♀. Tasan, Chumporn, P. Siam, 13-27 March 1919 [Nos. 4550, 4719, 4913].

Male. "Iris reddish brown; upper mandible black, lower and feet slate." Female. "Iris hazel, bill slate, upper mandible darker; feet pale slate".

Total length ♂, 159, 157, —; ♀, 148; wing ♂, 67, 66, 64; ♀, 58; tail ♂, 45, 45, 44; ♀, 45; tarsus ♂, 16, 17, 16; ♀, 13.5; bill from gape ♂, 34, 38.5, 34; ♀, 34.5 mm.

The bills of two males from Trang are 38 and 37.5, of a male from Ghirbi 35, and of a female from Bandon 36 mm.; while the corresponding wing measurements are 66, 64, 65, 60; so that on this small series females would, as stated by Hume (Stray Feath. vi, 1878, p. 175), appear to be smaller.

The comparison of eight specimens from Peninsular Siam, with fourteen others from Selangor, reveals no constant differences in colour; some specimens are more bronzy above and others greener, but the variations occur in both series and are probably dependent on wear of the plumage. The throat of nine specimens is greyer than others, and more sharply defined from the lower plumage, which varies in the strength of the yellow tint, but there are again age characters occurring in both series.

The dimensions of the Selangor series, 12 males measured dry, are wing, 62-70 (av. 67.7); bill from gape, 36-43 (av. 40 mm.): we are unaccountably deficient in females, but one measures, wing 62, bill from gape, 36 mm.

The following names have been applied to races of this group:—

- I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.
J. Robinson, Journ. F. M. S. Mus. vii, 1917.
K. Kloss, Ibis, 1918.
L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

- M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first and second parts).
M. 1. Baker, op. cit., iv, 1920 (third part).
M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

1. *Arachnothera longirostra longirostra* (Lath.).
Certhia longirostra Latham, Ind. Orn. I, 1790, p. 299 (Bengal, errore! Sylhet, *sic* Baker).
2. *Arachnothera longirostra prillwitzii* Hartert.
Nov. Zool. viii, 1901, p. 51 (Java).
This race is readily distinguished.
3. *Arachnothera longirostra buttikoferi* van Oort.
Notes Leyden Mus. xxxii, 1910, p. 195 (Borneo).
This form can also be separated on specimens before us.
4. *Arachnothera longirostra rothschildi* van Oort.
Loc. cit. supra (Natuna Islands).
5. *Arachnothera longirostra melanchina* Oberholser.
Smithsonian Misc. Coll. vol. 60, No. 7, 1912, p. 19. (Upper Siak River, East Sumatra).
6. *Arachnothera longirostra exochra* Oberholser.
Loc. cit. supra (South Pagi Island, West Sumatra).
7. *Arachnothera longirostra hypochra* Oberholser.
Loc. cit. supra (North Pagi Island, West Sumatra).
8. *Arachnothera longirostra niasensis* van Oort.
Loc. cit. supra (Nias Id.).
9. *Arachnothera longirostra zarkina* Oberholser.
Loc. cit. supra (Pulo Bangkaru, Banyak Islands, West Sumatra).
10. *Arachnothera longirostra flammifera* Tweedd.
Arachnothera flammifera, Tweeddale, P. Z. S. 1878, p. 343 (Leyte, Philippine Islands).
11. *Arachnothera longirostra dilutior* Sharpe.
Arachnothera dilutior, Sharpe, Nature, vol. 14, 1876, p. 298 (Palawan).
12. *Arachnothera longirostra pusilla* Blyth.
Arachnothera inornata (nec. *Cinnyris inornata*, Temm., 1823), Blyth, Asiat. Soc. Bengal. xii, 1843, p. 982 (Malay countries to Arracan: Mysore).
Arachnothera affinis (nec. *Cinnyris affinis*, Horsfield, 1821), Blyth, Journ. Asiat. Soc. Bengal. xv, 1846, p. 43, "eastern coast of the Bay of Bengal; Arracan to Malacca; Mysore" (nom. emend. for above).
Arachnothera pusilla, Blyth, Cat. Birds. Mus. Asiat. Soc. Bengal, 1849, p. 328 (nom. emend. for above). "Hab. Also Tippera".

There seems little doubt from the above synopsis of the literature that the typical race of this widely spread bird will have to be regarded as that inhabiting the Indian Empire.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1950.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

This leaves the Malayan form without a name unless "*Cinnyris cinereicollis*" Vieill. (Nouv. Dict. d' Hist. Nat. xxxi, 1819, p. 502) proves to have been founded on a Malayan species with a description. Otherwise, if Malayan specimens are distinct from Indo-Burmese birds, and it is almost incredible that they should not be, they will have to be known as *Arachnothera longirostra melanchima* Oberholser, which we have shown in examination of long series to be inseparable from South Malayan specimens (cf. Rob. & Kloss, Journ. F. M. S. Mus. viii, 1918, Pt. 2, p. 244; id. Journ. Straits Branch Roy. Asiat. Soc. No. 8, 1919, p. 131). At present we do not propose to attach any subspecific name to the Siamese bird.

***Arachnothera magna aurata* Blyth.**

Arachnothera aurata, Blyth, Journ. Asiat. Soc. Bengal, xxiv, 1855, p. 478 (Pegu).

Arachnothera magna, A., pp. 173, 507 (Tavoy); C. i, p. 327 (Tavoy).

Common in Northern Siam and also in the Malay States but not yet recorded from the northern part of the Peninsula.

554. *Arachnothera affinis modesta* (Eyton).

Anthreptes modesta, Eyton, P. Z. S. 1839, p. 105 (Malacca).

Arachnothera modesta, A., pp. 176, 507 (Tavoy to Bankasoon); C. i, p. 329 (Tenasserim); E., p. 72 (Patani); F., p. 77 (Trang); H., p. 109 (Bandon); M., p. 414 (Tung Song); Salvad., Ann. and Mag. Civ. Gen. (2) vii, 1889 (Malewoon).

♂. Tasan, Chumporn, P. Siam, 16 March 1919 [No. 4624].

"Iris brown; bill greenish black; feet yellow".

Total length 168, wing 78, tail 51, tarsus 17.5, bill from gape 38 mm.

There is not sufficient material to state whether any geographical variation occurs between northern and southern peninsular birds; a male from Trang has a wing of 78 and a female from Khao Nawng, Bandon, 72 mm., while a male from Temengoh, N. Perak, measures 84 and a male and female from Kuala Lumpur 86 and 77 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. I. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

Javan birds, *A. a. affinis*, are certainly distinct, while it is possible that the Sumatran form may be separable as *A. affinis concolor* Schleg.

555. *Arachnothera chrysogenys* (Temm.).

Nectarinia chrysogenys, Temminck, Pl. Col. 1826, pl. 388, fig. i (Java).

Arachnothera chrysogenys, A., p. 177 (Mergui, Malewoon); C. i, p. 331 (S. Tenasserim); E., p. 72 (Patani); F., p. 77 (Trang); H., p. 110 (Bandon); Salvad., Ann. and Mus. Civ. Gen. (2) vii, 1889, p. 436 (Malewoon).

♂. Tapli, P. Siam, 4 March 1919 [No. 4406].

"Iris dark hazel, bill black; tomia yellow; feet pinkish brown".

Total length 173, wing 77, tail 40, tarsus 19, bill from gape 44 mm.

There is no difference either in size or other respects between specimens from Peninsular Siam, from the south of the Malay Peninsula, and from N. E. Sumatra. All require comparison with typical Javan birds and if distinct therefrom will have to bear the name *Arachnothera chrysogenys copha* Oberholser, Smithsonian Misc. Coll. 60, No. 7, 1912, p. 20 (N. W. Sumatra).

556. *Arachnothera flavigaster* (Eyton).

Anthreptes flavigaster, Eyton, P. Z. S. 1839, p. 105 (Malacca).

Arachnothera flavigaster, B., p. 25 (Junk Seylon); F., p. 78 (Trang).

2 ♂. Chong, Trang, 18-19 Dec. 1909.

Wing 98, 103; bill from gape 43, 44 mm.

These specimens do not differ in any way from three males from Bukit Tangga, Negri Sembilan, which measure, wing 98-108; bill from gape, 42-45 mm: Hartert (Nov. Zool. ix, 1902, p. 574) mentions a male from Gunong Tahan, Pahang, 1,000 feet, with wing 115 and bill from gape 42 mm.

Sumatran birds are also inseparable; a male from Bencoolen district measures, wing 107, bill from gape, 45.5, and a female from the same district wing, 99, bill from gape, 40 mm,

Arachnothera simillima Hume, Stray Feathers, v, 1877,

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornithologie der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

p. 487, from Malacca, is merely founded on immature specimens of this form.

Bornean birds, if different, will have to bear the name *Archnothera flavigaster eytonii* Salvad. (Ann. Mus. Civ. Gen. 1874, p. 182.), though the name was really only applied on account of Eyton's title being a *vox hybrida*.

557. *Arachnothera (Arachnoraphis) crassirostris* (Reichenb.).

Arachnocestra crassirostris, Reichenb., Handb. Scansoriae, 1854, p. 314, No 747, pl. 592, fig. 4016 (Type locality, Sumatra: Rob. & Kloss).

Arachnothera crassirostris, Gadow, Cat. Brit. Mus. ix, 1884, p. 102; E., p. 73 (South Perak).

♂. Tasan, Chumporn, P. Siam, 20 March 1919 [No. 4707].

"Iris hazel grey; bill black, lower mandible greyish horn; feet dark olive green".

Total length 162, wing 73, tail 47, tarsus 16, bill from gape 32 mm.

This is a bird of very considerable rarity in the Malay Peninsula and has not hitherto been recorded from Siam. We possess two specimens only, one ♂ from Telom, Perak-Pahang border, and the other, ♀, from near Kuala Lipis, Pahang. The wings and bills of these specimens are 76, 77, and 32.5, 32 mm., respectively.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

DICAETIDAE.

FLOWER-PECKERS.

1	{ With bright colours in the plumage 2
	{ Plumage dull throughout 6
2	{ Under parts streaked 3
	{ Under parts not streaked 5
3	{ A single broad black median stripe, breast red .. <i>Dicaeum s. ignipectus</i> ♂
	{ Underside much striped, no red on breast 4
4	{ Abdomen white, no coronal patch <i>D. c. chrysorrhoeum</i>
	{ Abdomen yellow, a red or orange coronal patch <i>Prionichilus m. maculatus</i>
5	{ Rump and upper tail-coverts scarlet <i>Dicaeum cruentatum</i> subsp.
	{ Rump and upper tail-coverts orange or yellow .. <i>D. trigonostigma</i> subsp.
	{ Rump and upper tail-coverts blue or green <i>Prionichilus percussus ignicapillus</i>
6	{ Underside striped <i>Piprisoma m. modestum</i>
	{ Underside not striped 7
7	{ Underside brighter, deep buff <i>Dicaeum s. ignipectus</i> ♀
	{ Underside duller, pale olive grey <i>D. concolor olivaceum</i>

558. *Dicaeum trigonostigma trigonostigma* (Scop.).

Certhia trigonostigma, Scopoli, Del. Flor. & Faun. Insubr. ii, 1786, p. 91 (China: substitute Malay Peninsula; Hartert, Bull. Brit. Orn. Club, xxxviii, 1918, p. 73). Type locality here restricted to Malacca.

Dicaeum trigonostigma, E., p. 75 (Patani); F., p. 78 (Trang); H., p. 110 (Bandon); J., p. 189 (Terutau).

Specimens from Patani agree with typical examples; but many birds from the southern part of Peninsular Siam are intermediate between this race and the next, and on Terutau Island occur birds which may be definitely allocated to one or the other races: individual variation here is evidently greater than the geographical one.

We cannot recognise *D. croceiventre* Vig., of Sumatra, as distinct; but the Javanese form, *D. t. flaviclunis* Hartert, is separable by its paler yellow underparts, and the following race by its richer, more reddish, orange colour.

559. *Dicaeum trigonostigma rubropygium* Baker.

Bull. Brit. Orn. Club, xli, 1921, p. 108 (Mergui).

Dicaeum trigonostigma, A., p. 194 (Tavoy to Bankasoon); B., p. 22 (Junk Seylon); C. i, p. 336 (S. Tenasserim); L., p. 119 (Pulo Panjang, near Junk Seylon).

A. Hume & Davison, Stray Feathers, vi, 1879.

B. Müller, Die Ornis der Insel Salanga, 1892.

C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

♀. Pangnga River, P. Siam, 11 Feb. 1919 [No. 3951].

♂. Tung Pran, Takuatung, P. Siam, 14 Feb. 1919 [No. 3997].

♂, 6 ♀. Koh Rah, P. Siam, 17 Feb. 1919 [Nos. 4056-61, 4080].

2 ♂. Tapli, Pakchan, P. Siam, 5 March 1919 [Nos. 4676, 4810].

"Iris dark; maxilla black, mandible grey; feet black."

Total length ♂, 92, 93, 90, 93; ♀, 88, 90, 91, 90, 90, 88; wing ♂, 51, 50, 51, 49; ♀, 48, 48, 47, 47, 47, 48; tail ♂, 28, 28, 26, 28; ♀, 28, 27, 26, 27, 26, 28; tarsus ♂, 14, 13, 15.5, 14.5; ♀, 13, 14, 13.5, 13, 13, 14; bill from gape ♂, 12.5, 13.5, 12, 12; ♀, 13, 13, 13, 12, 13, 12.5 mm.

Baker gives the southern range of this race as Victoria Point; but examples from the west coast as far south as Junk Seylon are more like to it than to the southern race and should be placed with it.

560. *Dicaeum cruentatum ignitum* (Begbie).

Nectarinia ignita, Begbie, Ann. & Mag. Nat. Hist. (i) xvii, 1846, p. 408 (Malacca).

Dicaeum cruentatum, B., p. 21 (Malay Peninsula); E., p. 74 (Patani); F., p. 78 (Trang).

Dicaeum cruentata ignita, J., p. 189 (Terutau); L., p. 119 (Pulo Panjang).

The specimens referred to above indubitably belong to the southern form whose northern limit is, therefore, between Lat. 8° and 9° N., which appears to be the faunal boundary for many races.

561. *Dicaeum cruentatum siamensis* Kloss.

Dicaeum cruentatum siamensis, Kloss, Ibis, 1918, p. 216 (E. Siam: also Koh Lak); Robinson & Kloss, Ibis, 1919, p. 624 (South Annam).

Dicaeum cruentatum, A., p. 192 (Tavoy to Malewoon); C. i, p. 332 (Tenasserim); G., p. 149 (Ratburi or Petchaburi); H., p. 152 (Koh Pennan, Koh Samui); M., p. 415 (Bangkok, Meklong, Patiyu); Salvad., Ann. Mus. Civ. Gen. (2) vii, 1899, p. 433 (Malewoon); Robinson, Ibis, 1915, p. 755 (S. E. Siam).

Dicaeum cruentatum coccinea, L., p. 35 (Koh Lak).

♂ imm. ♀. Koh Rah, Takuapa Inlet, 16 Feb. 1919 [No. 4079].

♂, ♀. Renong River, P. Siam, 22 Feb. 1919 [Nos. 4158-9].

♂. Nam Chuk, Pakchan Estuary, 26 Feb. 1919 [No. 4264].

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919, (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

3 ♂, ♀. Koh Lak, 3-5 April 1919 [Nos. 4993-4, 5053, 5061].

Male. "Iris dark; bill and feet black." Female. "Iris dark; bill black, base of lower mandible grey; feet black or greyish black."

Total length ♂, 88, 92, 90, 96, 92; ♀, 82, 86, 88; wing ♂, 47, 48, 46, 48, 49; ♀, 46, 47, 45; tail ♂, 32, 30, 28, 27, 28; ♀, 28, 29, 28; tarsus ♂, 12, 12, 11, 11, 13; ♀, 12, 12, 11.5; bill from gape ♂, 11, 12, 10, 12, 12.5; ♀, 12, 11, 9.5 mm.

The acquisition of this series, all in good condition, has caused us again to review the available series of this species in our collection. It is evident, as Kloss states, that the Siamese male birds, as far south as Takuapa, differ from the Malayan form in being much whiter beneath, with only a slight tinge of buffy.* None of the specimens in the above series, or in the type series, have any tint of purplish in the greater or lesser wing-coverts, all being steely greenish, while the majority of south Malayan specimens have the purplish tint pronounced, especially on the outer wing-coverts.

We can distinguish no constant differences in the females. Kloss' type from Lat Bua Khao, and another from Koh Lak in his collection, are more washed with ferruginous above than most southern specimens, but another from Koh Lak is as grey as any from the south.

There is no tangible difference in size, but northern birds are perhaps very slightly larger. To sum up, it is evident that the Siamese bird is subspecifically distinct from the southern *D. c. ignita*, though whether it is correctly separated from the Chinese and Hainanese form, *D. c. coccinea* (Scop.), is rather more open to question.

562. *Dicaeum chrysorrhoeum chrysorrhoeum* Temm.

Dicaeum chrysorrhoeum, Temminck, Pl. Col. 478, 1829 (Java);
A., p. 195 (Shymotee to Malewoon); B., p. 22 (Junk Seylon);

*The two southernmost specimens in our collection, from the Endau River, South Pahang, and from Pulo Mapor, Rhio Archipelago, are fully as white beneath as any birds from Koh Lak. Both are adult males with wings (measured dry) 46, 49.5 mm. Tioman Island birds are buffy beneath.

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|--|---|
| A. Hume & Davison, Stray Feathers, vi, 1878. | E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905. |
| B. Müller, Die Ornithologie der Insel Salanga, 1882. | F. Robinson and Kloss, Ibis, 1910-11. |
| C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883. | G. Gairdner, Journ. N. H. Soc. Siam, i, 1915. |
| D. Bonhote, P. Z. S. 1901, Vol. i. | H. Robinson, Journ. F. M. S. Museums, v, 1915. |

C. i, p. 335 (Tenasserim); F., p. 78 (Trang); L., p. 36 (Koh Lak); J., p. 189 (Terutau); L., p. 119 (Ghirbi).

♂. Nam Chuk, Pakchan Estuary, 25 Feb., 1919 [No. 4228].

Male. "Iris rich brown; upper mandible black, lower slate; feet slate".

Total length 91; wing 55; tail 30; tarsus 16; bill from gape 12 mm.

We can distinguish no material differences between a series of six from Siam and others from the south of the Malay Peninsula, Sumatra, Borneo and Java (type locality). Should northern specimens at any time prove distinguishable from Javan birds, they will have to be known as *D. c. chrysochlore* Blyth (Journ. Asiat. Soc. Bengal, xii, 1843, p. 1009; type from Arracan).

***Dicaeum concolor olivaceum* Walden.**

Dicaeum olivaceum, Walden, Ann. & Mag. Nat. Hist. (4) xv, 1875, p. 401 (Toung-hoo); C. i, p. 333 (Tenasserim and Malay Peninsula).

This flower-pecker does not seem to have been obtained as yet from the country between Moulmein and Penang, though in both these places it is not uncommon.

563. *Dicaeum sanguinolentum ignipectus* (Hodgs.).

Myzanthus ignipectus, Hodgson, Journ. Asiat. Soc. Bengal, xii, 1843, p. 983 (Nepal).

Dicaeum ignipectus, D., p. 65 (Patalung).

564. *Prionochilus percussus ignicapillus* (Eyton).

Dicaeum ignicapilla, Eyton, P. Z. S. 1839, p. 105 (Malay Peninsula).

Prionochilus percussus, A., p. 196 (Bankasoon); C. i, p. 339 (Bankasoon).

Prionochilus ignicapillus, E., p. 74 (Patani); F., p. 79 (Trang); M., p. 416 (Tung Song).

♂. Tasan, Chumporn, P. Siam, 20 March 1919 [No. 4728].

"Iris reddish brown; upper mandible black, lower slate; feet slate".

Total length 102; wing 56; tail 32; tarsus 12.5; bill from gape 11.5 mm.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

The most northerly specimen recorded.

The scarlet pectoral patch on the above specimen is more extensive than on two others from Trang and others from the Malay States, some of which may be assumed to be topotypical; and the underparts are of a rather deeper yellow, in these respects approaching the Javanese race. The species is, however, everywhere somewhat rare and our series is not large.

565. *Prionochilus maculatus maculatus* (Temm.).

Pardalotus maculatus, Temm., Pl. Col. 1836, pl. 600, fig. 3 (Borneo).

Birds from Kedah and Perlis belong to the typical race, so we may expect those from Patani to do so also.

566. *Prionochilus maculatus septentrionalis* Rob. & Kloss.

Prionochilus maculatus septentrionalis, Robinson & Kloss, Journ. Fed. Malay States Museums, x, 1921, p. 206 (Chumporn).

Prionochilus maculatus, A., p. 199 (Mergui to Malewoon); C. i, p. 340 (S. Tenasserim); F., p. 79 (Trang); H., p. 110 (Bandon); M., p. 417 (Tung Song).

2 ♂, 2 ♀. Tapli, Pakchan Estuary, P. Siam, 3-10 March 1919 [Nos. 4393, 4478, 4487, 4532].

4 ♂. Tasan, Chumporn, P. Siam, 13-25 March 1919 [Nos. 4548, 4600, 4755, 4848].

"Iris red or reddish; bill black, lower mandible slate, sometimes the tip black; feet dark slate or slaty black."

Total length ♂, 96, 92, 91, 95, 98, 95; ♀, 90, 94; wing ♂, 56, 53, 53, 56, 53, 54; ♀, 49, 51; tail ♂, 29, 28, 30, 30, 31, 28; ♀, 28, 28; tarsus ♂, 13, 15, 12.5, 13, 13, 13; ♀, 16, 13; bill from gape ♂, —, 13, 12, 13, 11.5, 13; ♀, 12, 13 mm.

This form, which we have from as far south as Trang, differs from the Malayan race in having the ear-coverts greyer, the white throat-stripe narrower and the yellow of the underparts considerably brighter.

567. *Piprisoma modestum modestum* (Hume).

Prionochilus modestus, Hume, Stray Feathers, iii, 1875, p. 296 (S. Tenasserim); id. op. cit. viii, 1879, p. 56 (Takuapa); A., p. 200 (Mergui; Malewoon); C. i, p. 340 (S. Tenasserim; Takuapa).

A. Hume & Davison, Stray Feathers, vi, 1878.

B. Müller, Die Ornith. der Insel Salanga, 1882.

C. Oates, Birds Brit. Burmah, Vols. i. & ii, 1883.

D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1905.

F. Robinson and Kloss, Ibis, 1910-11.

G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.

H. Robinson, Journ. F. M. S. Museums, v, 1915.

Piprisoma modestum, F., p. 79 (Trang).

3 ♂, ♀ ad., ♀ imm. Tapli, Pakchan Estuary, P. Siam, 4-5 March 1919 [Nos. 4403-4, 4440, 4442].

♂. Tasan, Chumporn, P. Siam, 23 March 1919 [No. 4795].

Adult. "Iris reddish, or orange; upper mandible black, lower slate; feet slate or greenish black".

Immature. "Iris dark; bill yellow washed with brown on the maxilla; feet plumbeous".

Total length ♂, 107, 100, 100, 98; ♀, 103; wing ♂, 60, 62, 60, 62; ♀, 59; tail ♂, 38, 34, 33, 37; ♀, 37; tarsus ♂, 12, 12, 14, 13.5; ♀, 13; bill from gape ♂, 11, 12, 10, 11; ♀, 11 mm.

The immature bird differs from the adults in the almost complete absence of dark streaking on the lower parts, the middle of the belly and under tail-coverts being more washed with sulphur.

This subspecies ranges at least as far south as Trang, whence we have two specimens. In the Federated Malay States it is replaced by a darker and duller race with little or no white on the tail, *Piprisoma modestum finschii* (Bartels) [Syn. *Piprisoma modestum remotum*, Robinson & Kloss, Journ. Fed. Malay States, vi, 1915, p. 29], which has been met with in Johore and occurs again in Java, the type locality.

I. Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
56, No. 2, 1916.
J. Robinson, Journ. F. M. S. Mus. vii, 1917.
K. Kloss, Ibis, 1918.
L. Robinson and Kloss, Journ. N. H. Soc. Siam,
iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919.
(first and second parts).
M. 1. Baker, op. cit., iv, 1920 (third part).
M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

ZOSTEROPIDAE.

WHITE-EYES.

1	{ A pronounced yellow mesial abdominal stripe 2
	{ Abdominal stripe absent or obsolete 3
2	{ Underside drab-grey with whitish abdomen, throat bright yellow
	<i>Zosterops a. aureiventer</i>
3	{ Underside grey, throat pale yellow <i>Z. a. tahanensis</i>
	{ Throat and under tail-coverts pale yellow * <i>Z. palpebrosa williamsoni</i>
3	{ Throat and under tail-coverts bright yellow <i>Z. palpebrosa</i> subsp.

568. *Zosterops aureiventer aureiventer* Hume.

Zosterops aureiventer, Hume, Stray Feathers, vi, 1878, p. 519 (Tavoy); id. op. cit. vii, 1878, p. 452 (Malay Peninsula); id. op. cit. viii, 1879, p. 163; C. i, p. 344; Robinson & Kloss, Journ. F. M. S. Mus., viii, Pt. 2, 1918, pp. 251-2.

1 sex inc. Koh Rah, P. Siam, 17 Feb. 1919 [No. 4066].

"Iris dark; upper mandible black, lower slate, black at tip; feet slate".

Total length 103; wing 53; tail 37; tarsus 16; bill from gape 15 mm.

We think it probable that this species will be found to be confined almost exclusively to the coastal lands, and that all records from inland and montane districts should be referred to *Z. a. tahanensis*. The F. M. S. Museums possess series from various places on the coast of Selangor and from Pulo Kundur in the Rhio-Lingga Archipelago.

569. *Zosterops aureiventer tahanensis* Grant.

Zosterops tahanensis, O.-Grant, Bull. Brit. Orn. Club xix, 1906, p. 10 (Gunong Tahan, Pahang); id., Journ. F. M. S. Mus., iii, 1908, p. 20 (Gunong Tahan); F., p. 79 (Trang); H., p. 110 (Bandon).

Zosterops aureiventer (nec Hume), Hartert, Nov. Zool. ix, 1902, p. 575 (Gunong Tahan); E., p. 75 (Patani).

♀. Tasan, Chumporn, P. Siam, 14 March 1919 [No. 4594].

"Iris dark; maxilla black, mandible slate; feet slate".

Total length 103; wing 51; tail 42; tarsus 13; bill from gape 13 mm.

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornis der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote, P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1950.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

This specimen is an example of Grant's *Z. tahanensis*, with a number of which we have compared it. But it is also very probable that they are conspecific with Salvadori's *Z. mesoxantha*, from Karenne (Ann. Mus. Civ. Gen. (2 A) vii, 1889, p. 396; Tahoe, near Tounghoo), with the description of which they seem in accordance. Grant probably overlooked this form, for otherwise, seeing that it is obviously the closest ally, if not strictly identical, it would certainly have been mentioned: until we can prove, however, that *tahanensis* is synonymous with *mesoxantha* we use the name we are certain of.

570. *Zosterops palpebrosa williamsoni* Rob. & Kloss.

Robinson & Kloss, Journ. N. H. Soc. Siam, iii, 1919, p. 446 (Meklong River, Central Siam).

1 sex inc. Koh Rah, P. Siam, 17 Feb. 1919 [No. 4066].

"Iris dark; maxilla black, mandible slate with black tip; feet slate".

Total length 103; wing 53; tail 37; tarsus 16; bill from gape 15 mm.

571. *Zosterops palpebrosa* Temm., subsp.?

Zosterops palpebrosa, E., p. 75 (Tanjong Patani).

A skin obtained by Gen. E. W. Trotter at Patani, in April 1916, appears to belong to this species; but it is much damaged and we are unable to refer it to any particular race. It is doubtless the same as the two specimens from Tanjong Patani recorded by Grant as *Z. palpebrosa* (E., p. 75). As compared with an example of *Z. p. simplex*, from Kukiang, China, the throat is a richer yellow, as in *Z. a. aureiventer*. Wing 50, tail 38 mm.

I. Gyldestolpe, Kungl. Sv. Vet. Akad. Handl. 56, No. 2, 1916.

J. Robinson, Journ. F. M. S. Mus. vii, 1917.

K. Kloss, Ibis, 1918.

L. Robinson and Kloss, Journ. N. H. Soc. Siam, iii, 1919.

M. Baker, Journ. N. H. Soc. Siam, iii, 1919. (first and second parts).

M. 1. Baker, op. cit., iv, 1920 (third part).

M. 2. Baker, Fauna Brit. Ind., Birds, i, 1922.

CHALCOPARIIDAE.

RUBY-CHEEKS.

572. *Chalcoparia singalensis interposita* Rob. & Kloss.

Journ. Fed. Malay States Mus. x, 1921, p. 209 (Takuapa).

Chalcoparia singalensis, A., p. 189 (Tavoy to Malewoon); J., p. 191 (Terutau); L., p. 119 (Junk Seylon).

Chalcoparia phoenicotis, B., p. 22 (P. Siam); Salvad., Ann. Mus.

Civ. Gen (2) vii, 1889, p. 435 (Malewoon); II., p. 106 (Bandon).

Anthreptes singalensis, C. i, p. 326 (partim: Tenasserim and Malay Peninsula).

Chalcoparia singalensis singalensis, M., p. 415 (partim: Bangkok, Patiyu and Tung Song).

♂ ad., 2 ♂ imm. Koh Pra Tung, P. Siam, 18 Feb. 1919 [Nos. 4093-5].

2 ♂ ad. Mamoh, P. Siam, 26, 28 Feb. 1919 [Nos. 4275, 4322].

♂, ♀. Tapli, P. Siam, 7-11 March 1919 [Nos. 4479, 4534].

♂ imm. Tasan, Chumporn, P. Siam, 14 March 1919 [No. 4593].

3 ♂ ad., 2 ♀ ad., 2 ♀ imm. Hat Sanuk, P. Siam, 12-18 April 1919 [Nos. 5243, 5285, 5308-10, 5353, 5392].

Male adult. "Iris red, brown or chestnut; bill black or greenish black; feet greenish sage or oil green." Female adult. "Similar, but bill paler at base." Immature. "Iris reddish chestnut to dark; bill black to horn, yellowish at base; feet sage green, soles gamboge yellow."

Total length ♂, 112, 108, 105, 113, 106 (app.), 108, 108; ♀, 112; 109, 103; wing ♂, 53, 53, 53, 56, 54, 53, 51; ♀, 52, 51, 51; tail ♂, 44, 45, —, 46, 43, 43, 43; ♀, 44, 42, 38; tarsus ♂, 17.5, 16, 18, 17.5, —, —, 16.5; ♀, 18, 17, 15; bill from gape ♂, 16.5, 16, 18, 14, —, 14, 15; ♀, 16, 14, 15 mm.

This race, of which we have seen examples from Bangkok south through the Peninsula to Terutau Island and Bangnara in Patani, is intermediate between *C. s. singalensis*, of the Malay

A. Hume & Davison, Stray Feathers, vi, 1878.
B. Müller, Die Ornith. der Insel Salanga, 1882.
C. Oates, Birds Brit. Burmah, Vols. i & ii, 1883.
D. Bonhote. P. Z. S. 1901, Vol. i.

E. O. Grant, Fasciculi Malayenses, iii (Birds), 1950.
F. Robinson and Kloss, Ibis, 1910-11.
G. Gairdner, Journ. N. H. Soc. Siam, i, 1915.
H. Robinson, Journ. F. M. S. Museums, v, 1915.

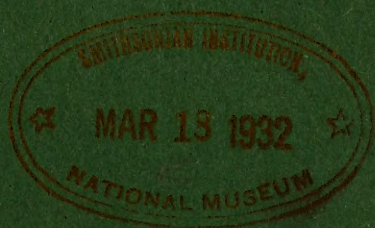
States, and *C. s. koratensis*, of East and North Siam. Males have the abdomen nearly as bright as the latter, but the rufous of the foreneck extends downwards as far, and ends as indefinitely, as, in the former. Females are practically indistinguishable from *koratensis*, but have the abdomen less greenish yellow than in *singalensis*. The bills in this race and in *singalensis* appear to be larger than in *koratensis*.

Burmese birds probably belong to the present form, while *koratensis* occurs eastwards of the Chao Phya river.

- I.** Gyldenstolpe, Kungl. Sv. Vet. Akad. Handl.
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J. Robinson, Journ. F. M. S. Mus. vii, 1917.
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iii, 1919.

- M.** Baker, Journ. N. H. Soc. Siam, iii, 1919.
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